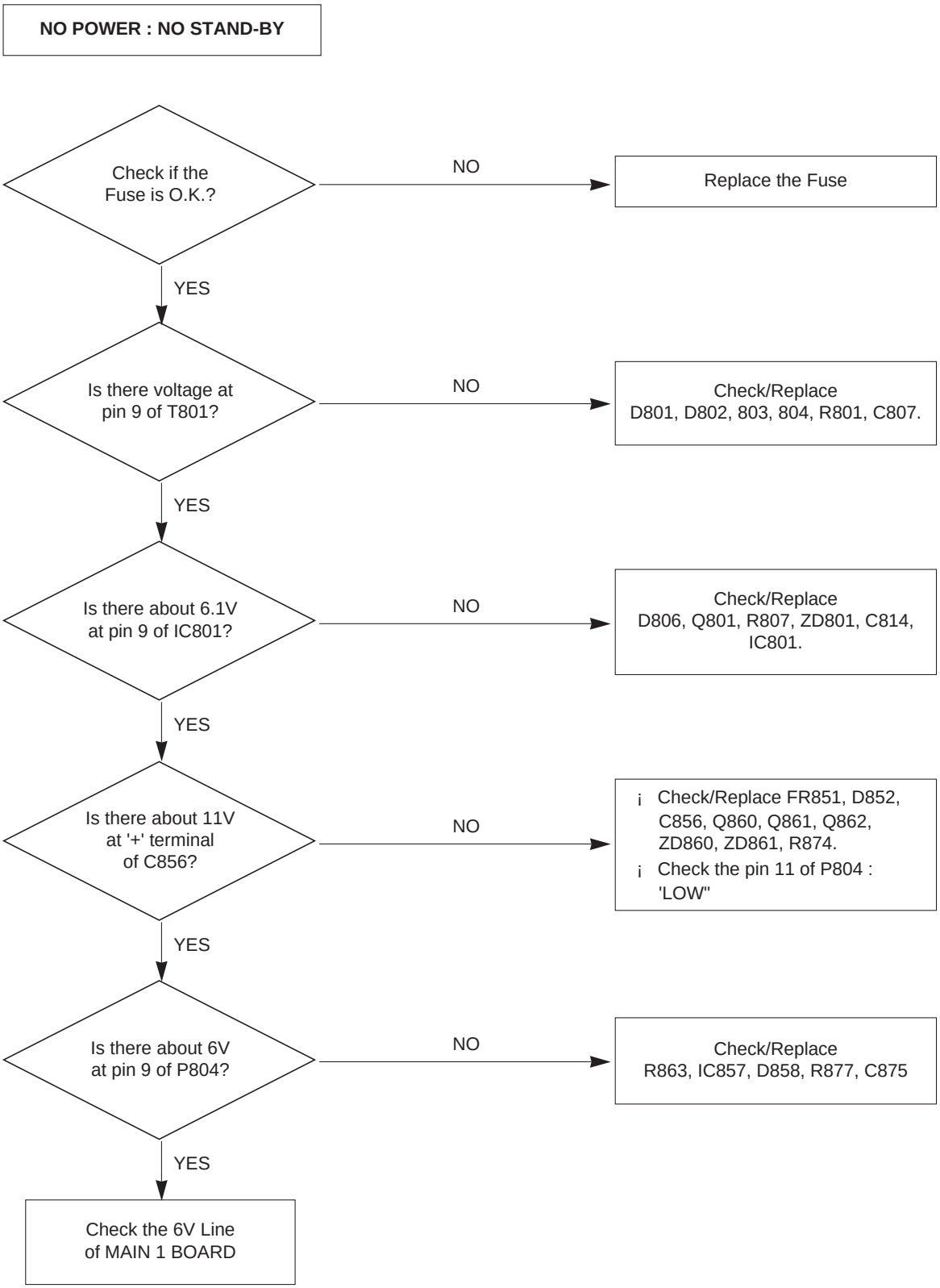
GOLDSTAR PV-71A

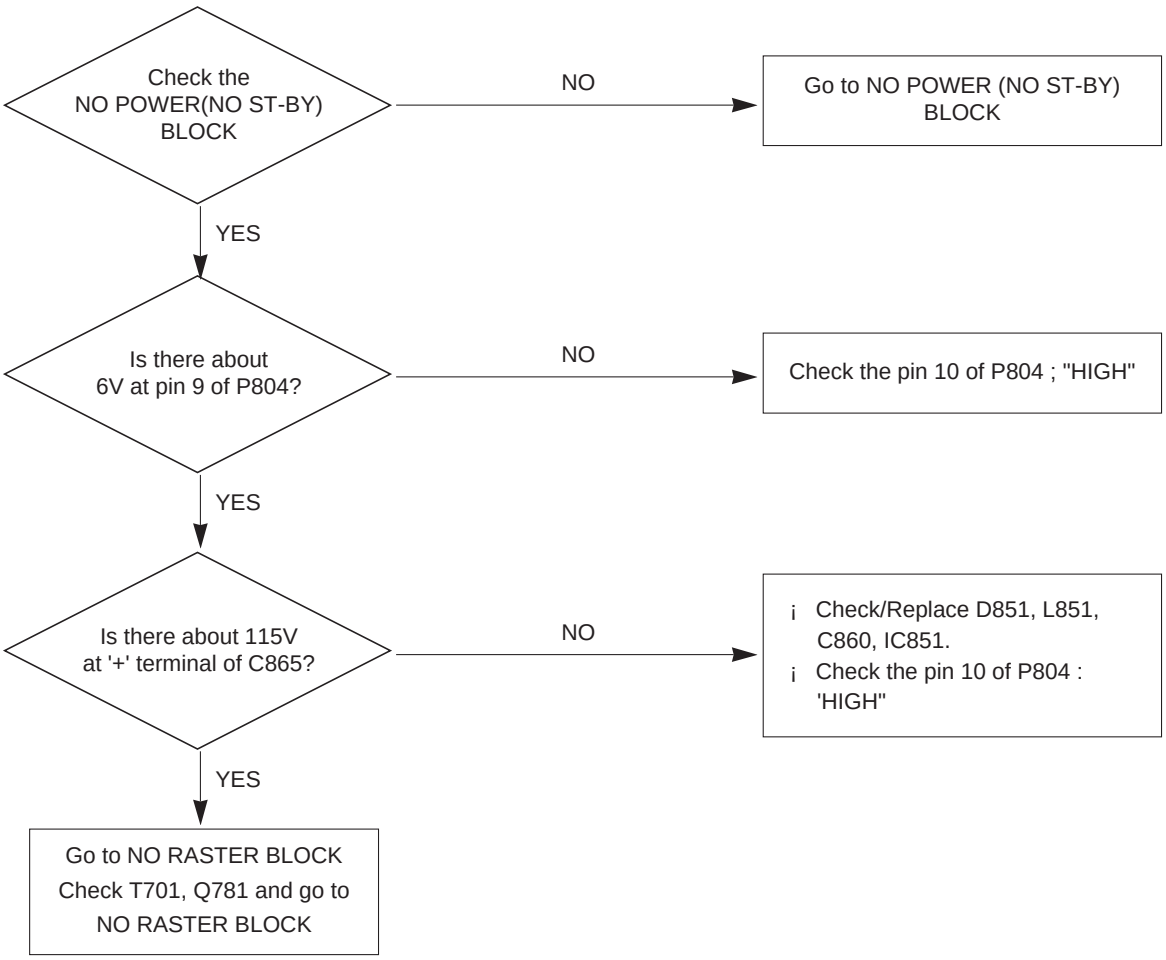
MODEL

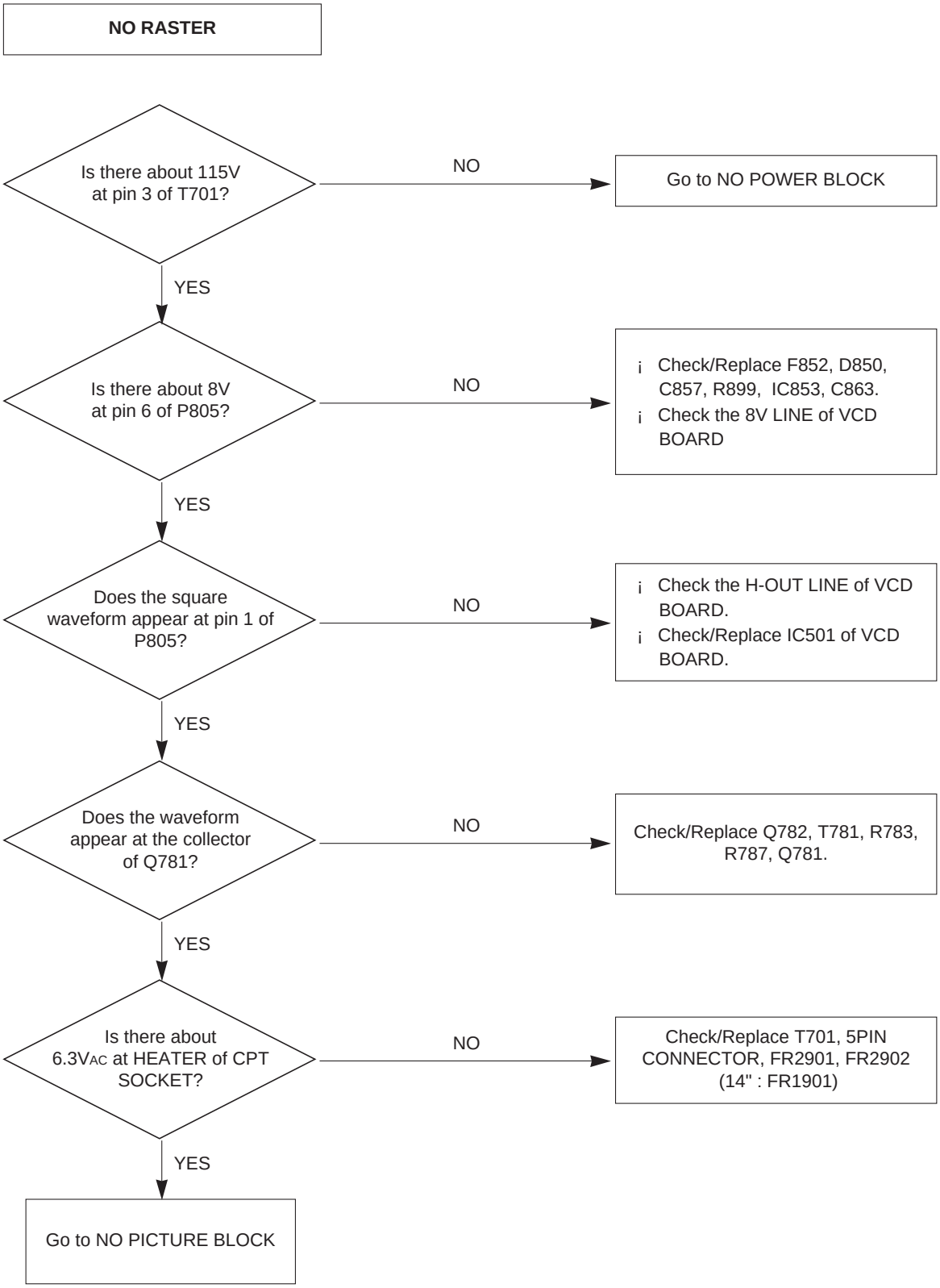
SERVICE MANUAL

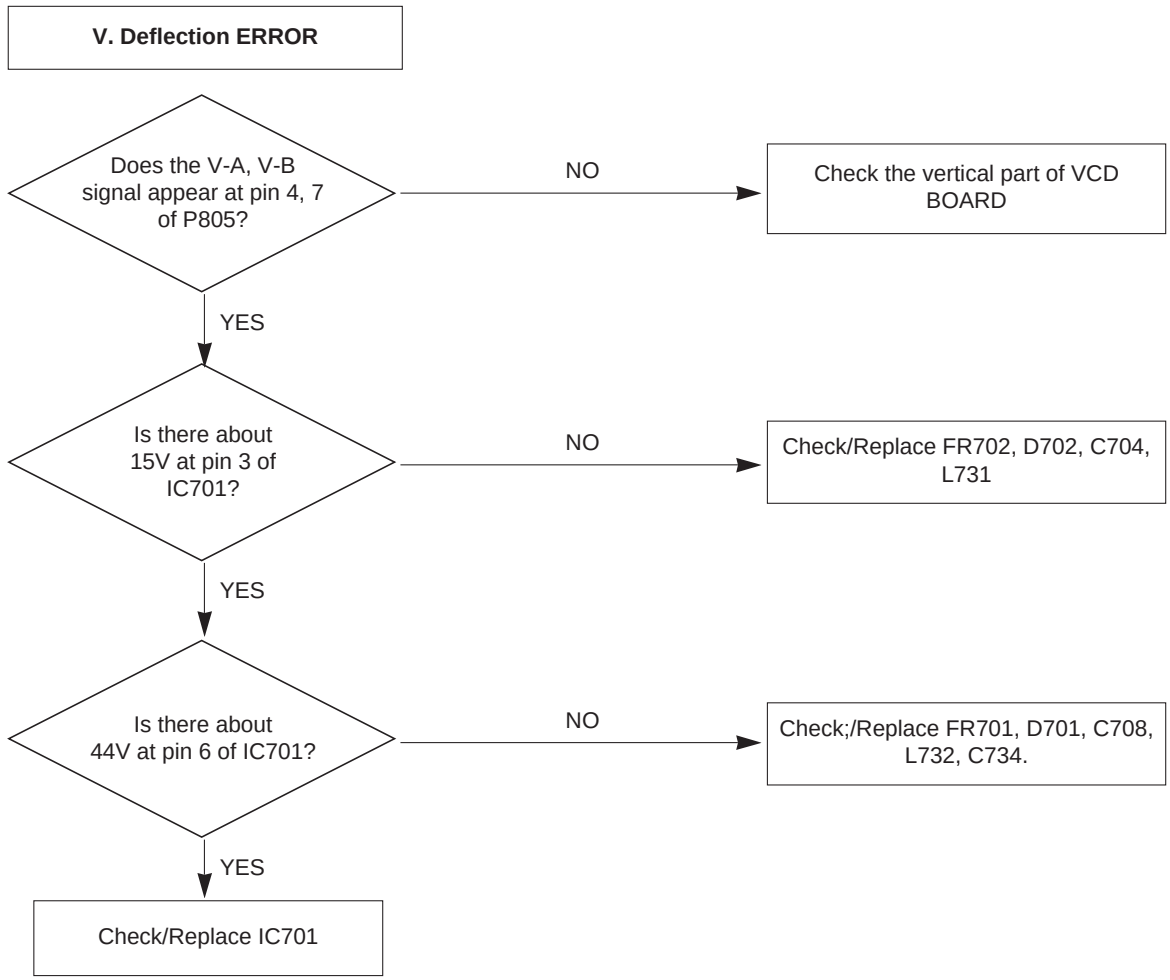
TROUBLE SHOOTING

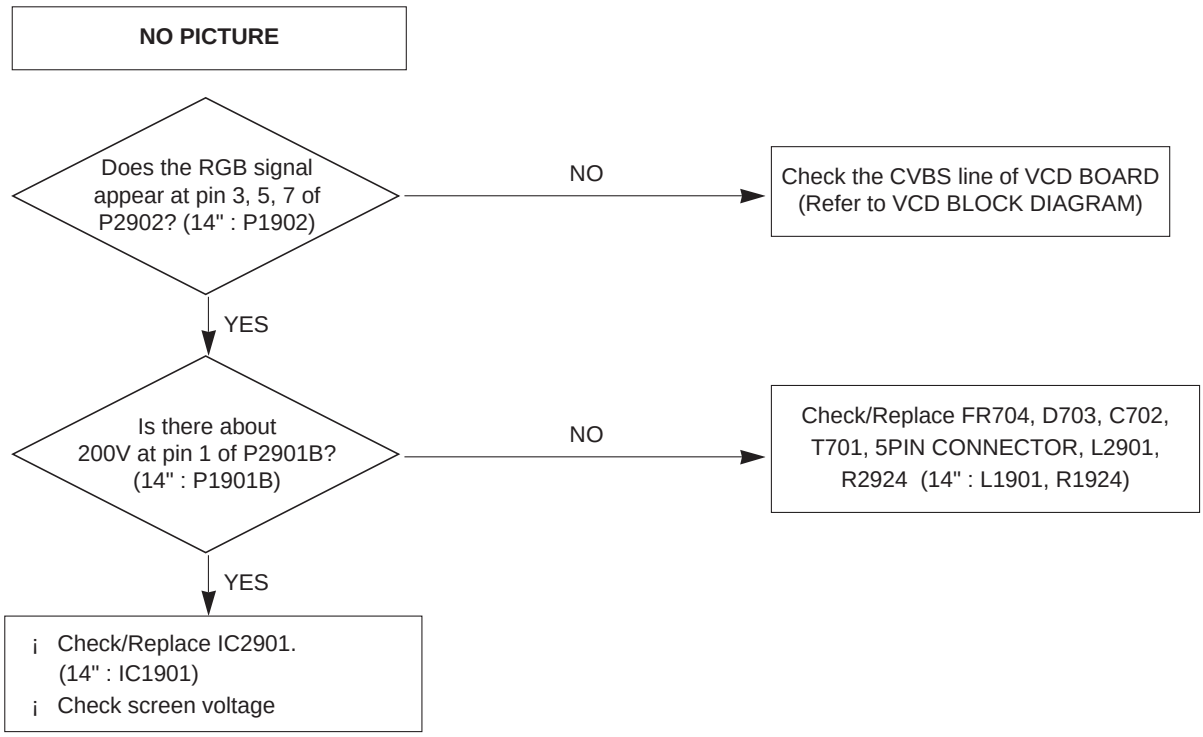

NO POWER : NO STAND-BY
Check if the Fuse is O.K.?
NO
Replace the Fuse
YES
Is there voltage at pin 9 of T801?
NO
Check/Replace D801, D802, 803, 804, R801, C807.
YES
Is there about 6.1V at pin 9 of IC801?
NO
Check/Replace D806, Q801, R807, ZD801, C814, IC801.
YES
Is there about 11V at '+' terminal of C856?
NO
¡ Check/Replace FR851, D852, C856, Q860, Q861, Q862, ZD860, ZD861, R874.
¡ Check the pin 11 of P804 : 'LOW"
YES
Is there about 6V at pin 9 of P804?
NO
Check/Replace R863, IC857, D858, R877, C875
YES
Check the 6V Line of MAIN 1 BOARD

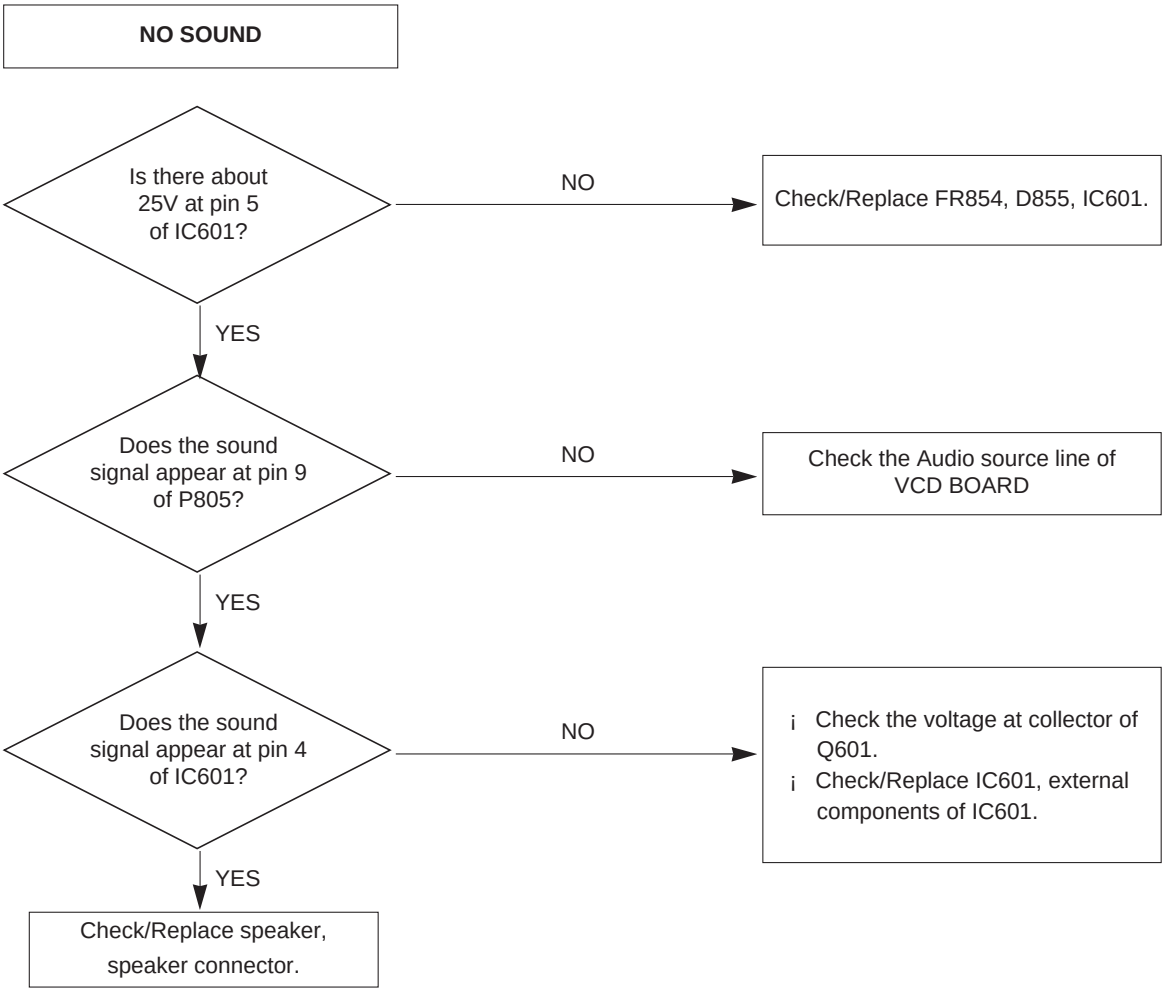
NO POWER : NO MONITOR ON



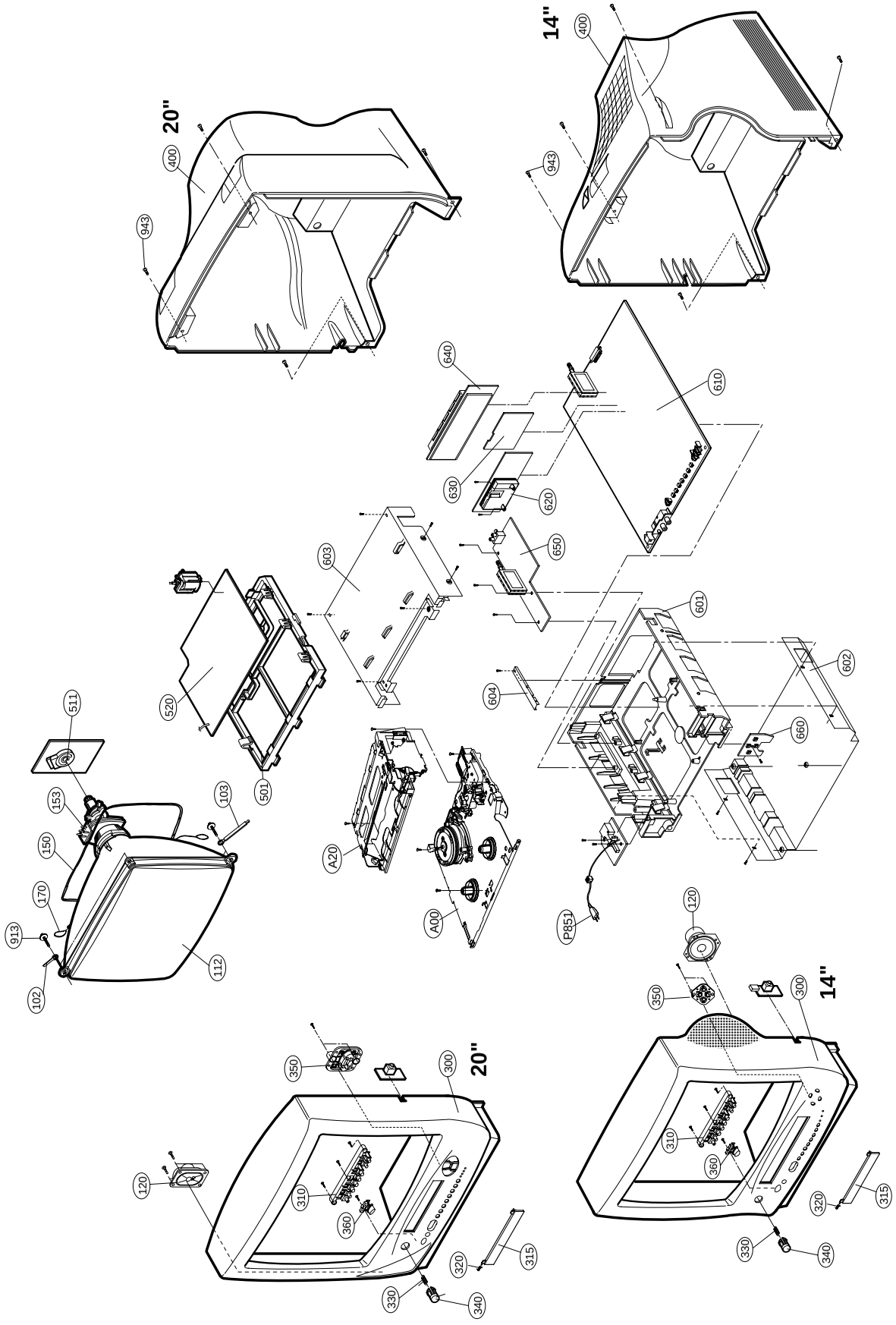

NO RASTER
Is there about 115V at pin 3 of T701?
NO
Go to NO POWER BLOCK
YES
Is there about 8V at pin 6 of P805?
NO
¡ Check/Replace F852, D850, C857, R899, IC853, C863.
¡ Check the 8V LINE of VCD BOARD
YES
Does the square waveform appear at pin 1 of P805?
NO
¡ Check the H-OUT LINE of VCD BOARD.
¡ Check/Replace IC501 of VCD BOARD.
YES
Does the waveform appear at the collector of Q781?
NO
Check/Replace Q782, T781, R783, R787, Q781.
YES
Is there about 6.3VAC at HEATER of CPT SOCKET?
NO
Check/Replace T701, 5PIN CONNECTOR, FR2901, FR2902 (14" : FR1901)
YES
Go to NO PICTURE BLOCK


V. Deflection ERROR
Does the V-A, V-B signal appear at pin 4, 7 of P805?
NO
Check the vertical part of VCD BOARD
YES
Is there about 15V at pin 3 of IC701?
NO
Check/Replace FR702, D702, C704, L731
YES
Is there about 44V at pin 6 of IC701?
NO
Check;/Replace FR701, D701, C708, L732, C734.
YES
Check/Replace IC701


NO PICTURE
Does the RGB signal appear at pin 3, 5, 7 of P2902? (14" : P1902)
NO
Check the CVBS line of VCD BOARD (Refer to VCD BLOCK DIAGRAM)
YES
Is there about 200V at pin 1 of P2901B? (14" : P1901B)
NO
Check/Replace FR704, D703, C702, T701, 5PIN CONNECTOR, L2901, R2924 (14" : L1901, R1924)
YES
¡ Check/Replace IC2901. (14" : IC1901)
¡ Check screen voltage


NO SOUND
Is there about 25V at pin 5 of IC601?
NO
Check/Replace FR854, D855, IC601.
YES
Does the sound signal appear at pin 9 of P805?
NO
Check the Audio source line of VCD BOARD
YES
Does the sound signal appear at pin 4 of IC601?
NO
¡ Check the voltage at collector of Q601.
¡ Check/Replace IC601, external components of IC601.
YES
Check/Replace speaker, speaker connector.

EXPLODED VIEW



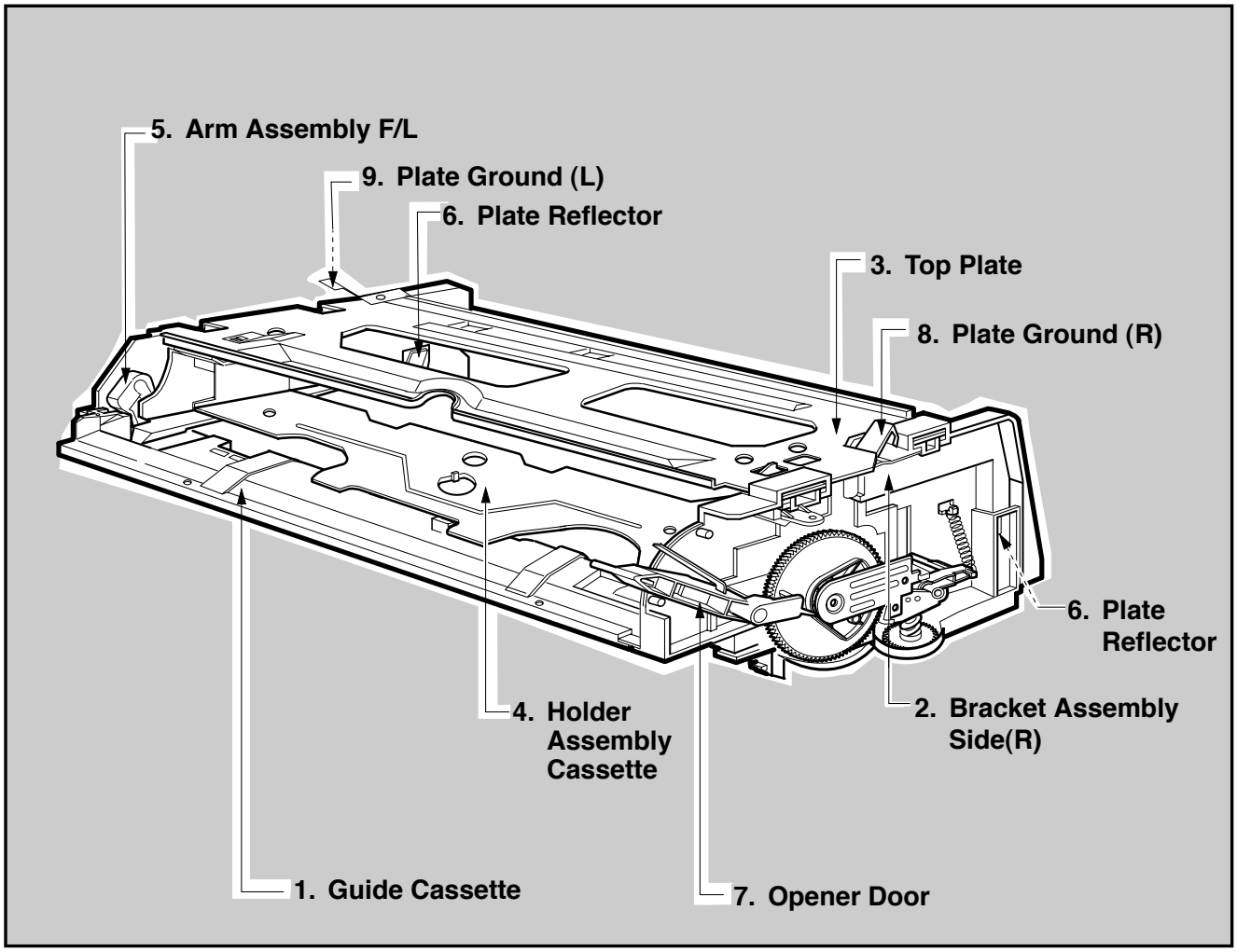
EXPLODED VIEW PART LIST

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

LOCA. NO	PART NO	DESCRIPTIONS
102	341-721E	HOLDER,D-COIL(FOR SAFA,L=65)
103	341-721F	HOLDER,D-COIL(FOR SAFA,L=130)
⚠ 112	2055-V1221B	CPT A48QAD220X 03N7ND(+0.4) 20"
	2055-V0744D	CPT A34KPU02XX 31N7ND(+0.4) 14"
120	120-C93G	SPEAKER,GENERAL C091P06K1459 8OHM 5/ 20"
	120-101B	SPEAKER,C080P17-54PK14 14"
⚠ 150	150-D02M	COIL,DEGAUSSING,CU 20" 60T 15OHM
	150-D02B	COIL,DEGAUSSING,CU 14" 42T 5.7OHM
⚠ 153	153-276A	DY DCAM1-20PLAA 20"
	153-113V	DY DCAD2-14SNAB 14"
⚠ 170	170-851B	LEAD SET ASSY,CPT EARTH(L=640) 20"
	170-851A	LEAD SET ASSY,CPT EARTH(L=460) 14"
300	3091V00057E	CABINET ASSY,KI-20U72X KPLKU,LG (SILVER)
	3091V00064A	CABINET ASSY,KI-14U71
315	315-740H	DOOR,FOR TVCR
310	5020V00118A	BUTTON,CONTROL 20"
	5020V00137A	BUTTON,CONTROL 14"
320	4970V00001A	SPRING,CST DOOR(2880)
330	320-075B	SPRING,KNOB 20"
	320-075R	SPRING,COIL 14"
340	5020V00116A	BUTTON,POWER MAIN 20"
	5020V00135A	BUTTON,POWER MAIN 14"
350	5020V00119A	BUTTON,CH/VOL 20"
	5020V00138A	BUTTON,CH/VOL 14"
360	5020V00117A	BUTTON,POWER SUB 20"
	5020V00136A	BUTTON,POWER SUB 14"
400	3809V00043E	BACK COVER ASSY,KI-20U72 KPLKU
	3809V00043F	BACK COVER ASSY,KI-20U71 KPLKU
	3809V00076E	BACK COVER ASSY,KI-14U71 KPLKU
501	4810V00012A	BRACKET,SMPS(27DECK)
511	6620VBC001A	SOCKET,CPT 29.1 PHI SINGLE(PCS629-03A) 20"
	381-100F	SOCKET,CPT 022.5 S/LESS(PCS625-11) 14"
520	6871VDM027A	PWB ASSY,MAIN2 PV-71A 20INCH(SMPS/CPT)
	6871VDM027E	PWB ASSY,MAIN2 PV-71A 20INCH(SMPS/DEF)
	6871VDM027F	PWB ASSY,MAIN2 PV-71A 14INCH
601	4810V00062B	BRACKET,MAIN 1 ASSY SUS SPUUPRTER
602	4814V00016A	SHIELD,BOTTOM
603	4814V00015A	SHIELD,TOP 20"
	4814V00015D	SHIELD,VCR ASSY SBHG1-A 14"
604	4980V00014A	SUPPORTER,YC,VCD PCB
610	6871VMM065B	PWB ASSY,MAIN1, PV71A(I/I,2T,W/TXT)
	6871VMM065N	PWB ASSY,MAIN1, PV71A(I/I,1T,W/O TXT)
	6871VMM065M	PWB ASSY,MAIN1, PV71A(I/I,1T,W/TXT)
620	6871VSM094B	PWB ASSY,Y/C PV71A,(W/O SECAM), M/I
630	6871VSM121B	PWB ASSY,EXTRA SUB PV71A ETC (2T,B/G,I/
	6871VSM121C	PWB ASSY,A/V PV71A (1T,B/G,I/I)
640	6871VSM095C	PWB ASSY,VCD PV71A 20" (I/I,TXT),M/I
	6871VSM095F	PWB ASSY,VCD PV71A 20" (I/I,W/O TXT)
	6871VSM203G	PWB ASSY,VCD PV71A 14" (I/I,W/O TXT)
	6871VSM203A	PWB ASSY,VCD/TXT 14"
650	6871VSM122B	PWB ASSY,PV71A, TUNER2(I/I) ,M/I
660	6871VSM070A	PWB ASSY,KEY BOARD MV-64A
913	332-057B	SCREW ASSY,HEXAGON HEAD 20"
	332-057A	SCREW ASSY,HEXAGON HEAD 14"
943	1PPF0403116	SCREW,PAN HEAD D4 L16
A00	145-001H	DECK ASSY,TV27A20P183B(6731RTV005B)
A20	146-001B	HOUSING ASSY,D27S(VIDEO (219-023A))
⚠ P851	174-225E	CORD ASSY,POWER UK,224A
"	174-225K	CORD ASSY,POWER UK L4=100

FRONT LOADING MECHANISM DISASSEMBLY

¡ Front Loading Mechanism Assembly, Parts Location



¡ **Component list below will be discribed as if the top and bottom covers, front panel and deck mechanism assembly have already been removed.**

1. Guide Cassette
2. Bracket Assembly Side (R)
3. Top Plate
4. Holder Assembly Cassette
5. Arm Assembly F/L
6. Plate Reflector
7. Opener Door
8. Plate Ground(R)
9. Plate Ground(L)

FRONT LOADING MECHANISM DISASSEMBLY

1. Front Loading Mechanism Assembly (Fig. A-1)

1) Remove the Top and Bottom Covers and Front Panel.
2) Remove two screws(A).
3) Lift up the Front Loading Mechanism Assembly in the direction of arrow(B).

NOTE

When disassembling and reassembling:
a. Give special attention to removal and to reassembly because two tabs(L), (R) are engaged.

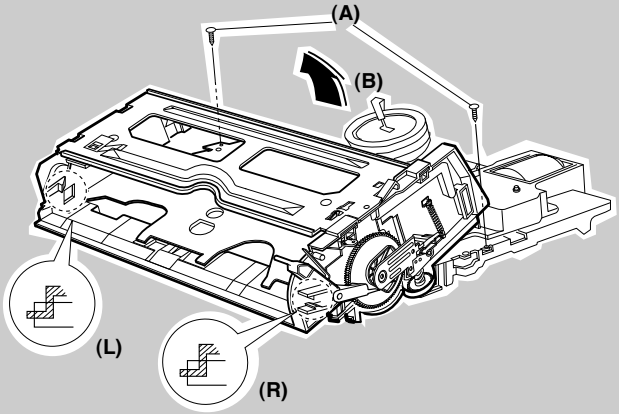


Fig. A-1 Front Loading Mechanism

2. Guide Cassette (Fig. A-2)

1) Push tab(R) of the Cassette Guide and disengage with Bracket Side(R) and push tab(L) of the cassette Guide which is engaged with Bracket Side(L) and remove it in the direction of arrow (B).

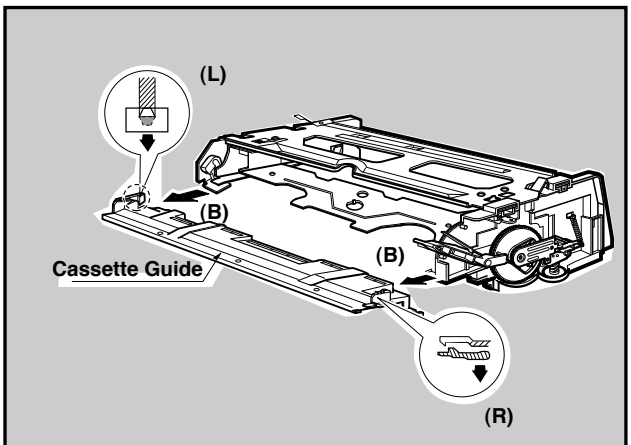


Fig. A-2 Guide Cassette

3. Bracket Assembly Side)(R (Fig. A-3)

1) Push the tabs(L), (R) of Bracket Assembly Side(R) to disengage with the Top Plate and remove it in the direction of arrow(A).

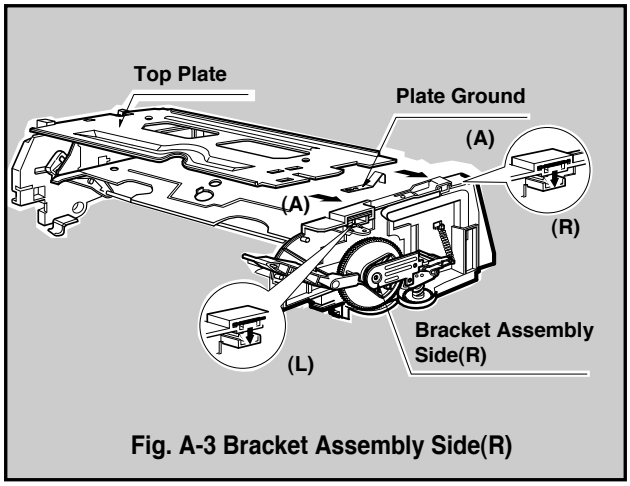


Fig. A-3 Bracket Assembly Side(R)

4. Bracket Side(L)/Top Plate (Fig. A-4)

1) Remove the screw(B).
2) Remove the plate Ground(L), in the direction of arrow(A).
3) Push the locking tab(L1) and then remove the Bracket Side(L) in the direction of arrow(B).
4) The Top Plate can be removed by Separating the Bracket Side(L).

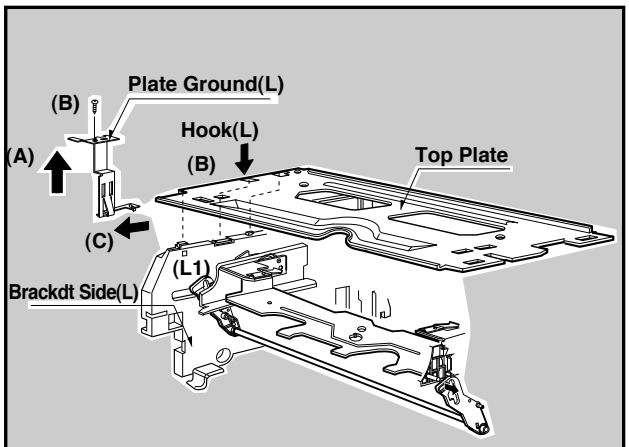


Fig. A-4 Bracket Side(L)/Top Plate

FRONT LOADING MECHANISM DISASSEMBLY

5. Holder Assembly Cassette (Fig. A-5)

1) Separate the Bracket Assembly Side(R).
2) Push the two lever tabs(L), (R) down and separate the Holder Assembly Cassette and the Arm Assembly F/L from the Top Plate.

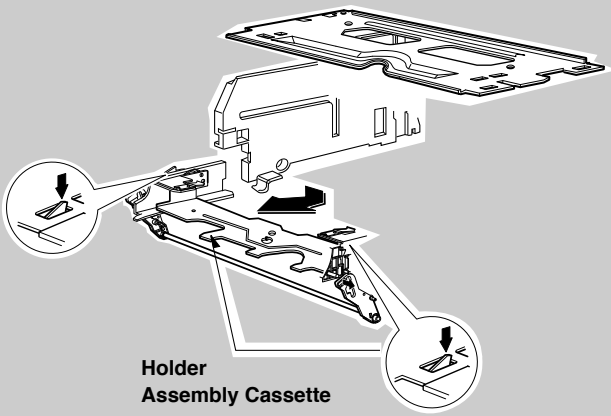


Fig. A-5 Holder Assembly Cassette

6. Arm Assembly F/L (Fig. A-6)

1) Remove by pulling the Arm F/L(R) from the Bracket Holder(R) Boss in the direction of arrow(A).
2) Separate the Arm Assembly F/L from Cassette Holder Boss in the direction of arrow(B).

NOTE

When disassembling and reassembling:
a. Be sure to remove the Arm F/L(R) first. If not the Arm Assembly F/L can be damaged.

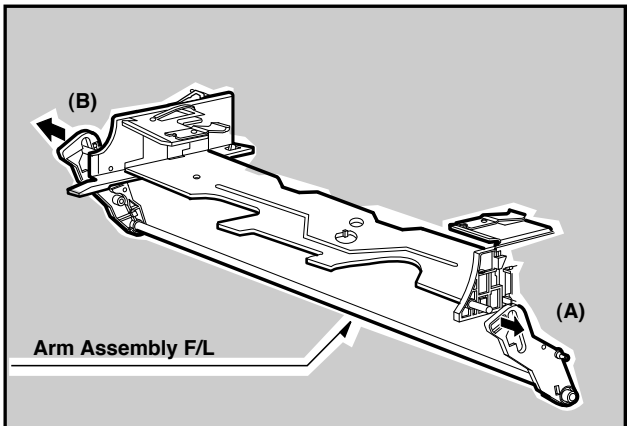


Fig. A-6 Arm Assembly F/L

7. Spring Stopper (Fig. A-7)

1) Remove the Spring Stopper which is connected to the tabs(A), (B) of the Lever Stopper(R) and the Bracket Holder(R).

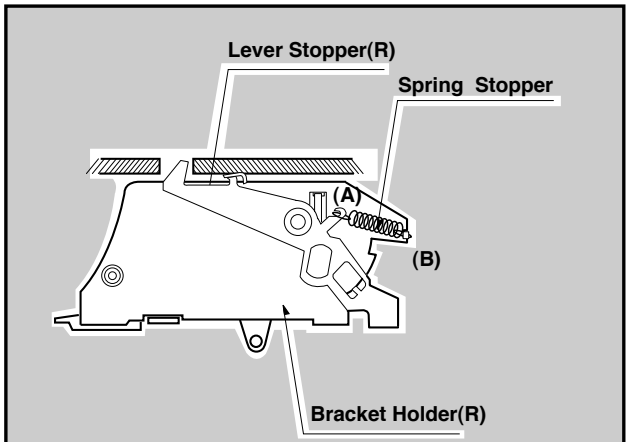


Fig. A-7 Spring Stopper

8. Plate Reflector (Fig. A-8)

1) Detach the Plate Reflector(L) from the Bracket Side(L) by using a knife.
2) Detach the Plate Reflector(R) from the Bracket Assembly Side(R) by using a knife.

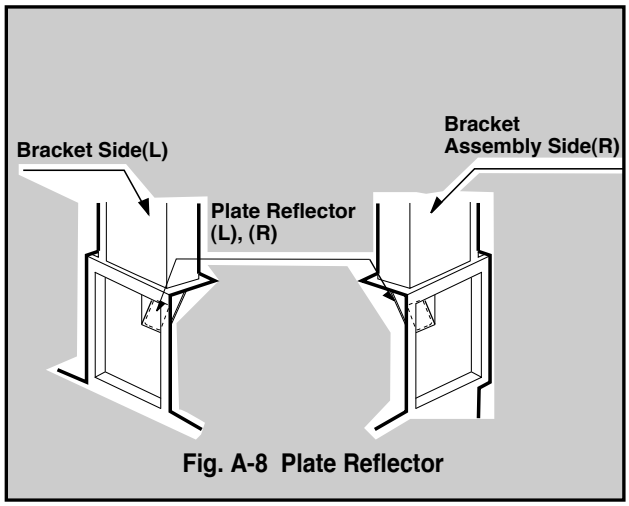
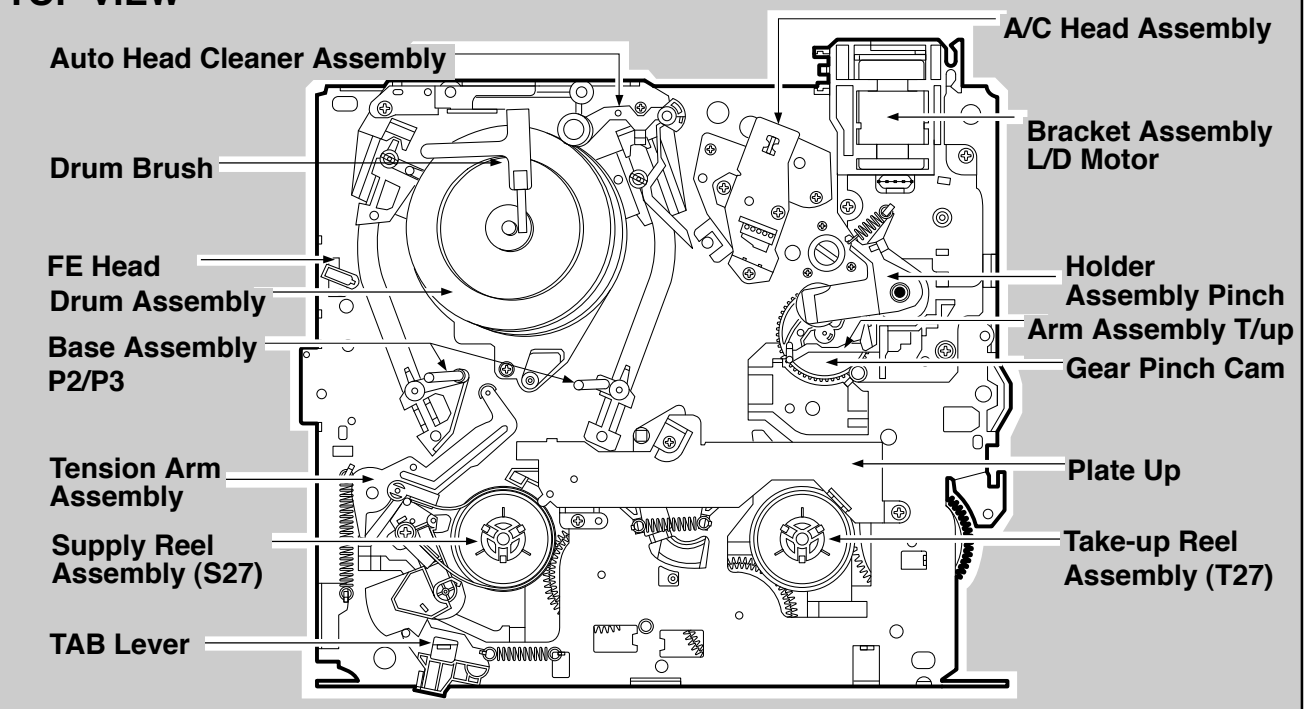


Fig. A-8 Plate Reflector

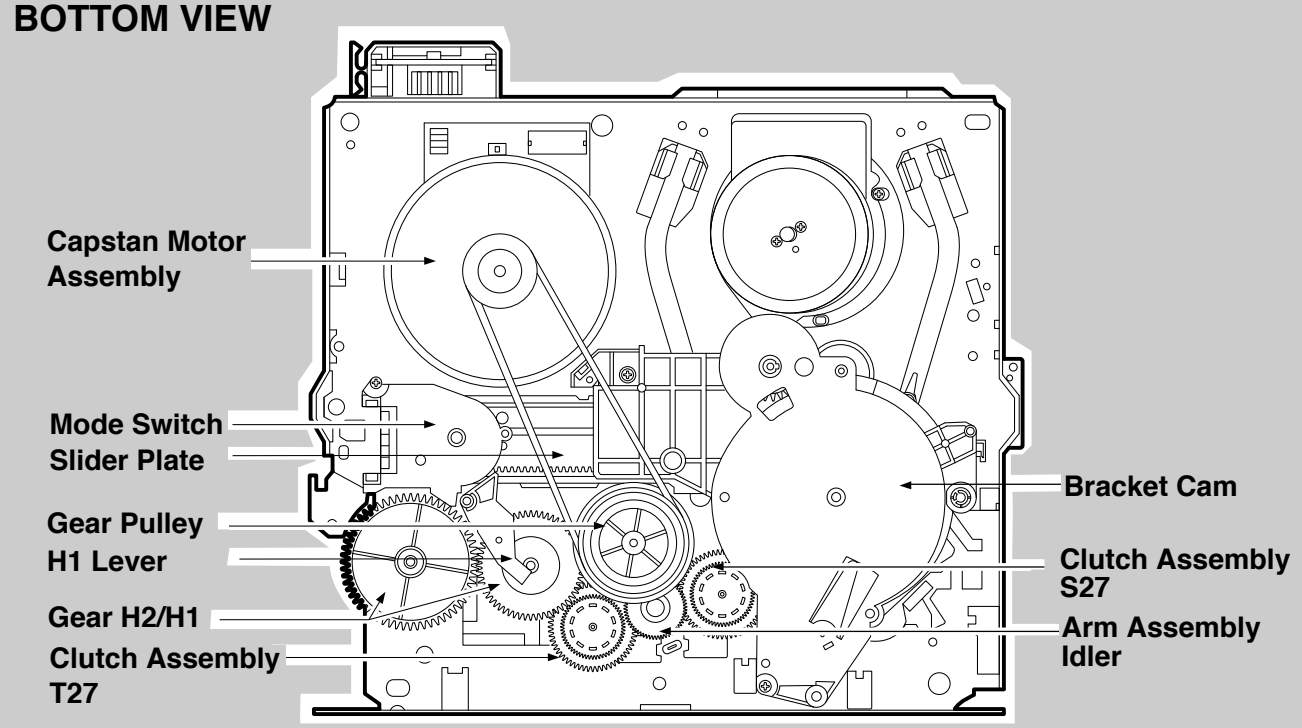
DECK MECHANISM DISASSEMB Y

* Deck Mechanism Parts Location

TOP VIEW



BOTTOM VIEW



DECK MECHANISM DISASSEMB Y

1. Auto Head Cleaner Assembly (Fig. B-1)

(Optional Item)

1) Push the tab(A) of Auto Head Cleaner and remove the Cleaner Arm Assembly.

NOTES:

When disassembling and reassembling:

a. Do not allow fingers or tools to touch the outside of the Drum.

b. Be careful not to get any foreign substance on the Roller.

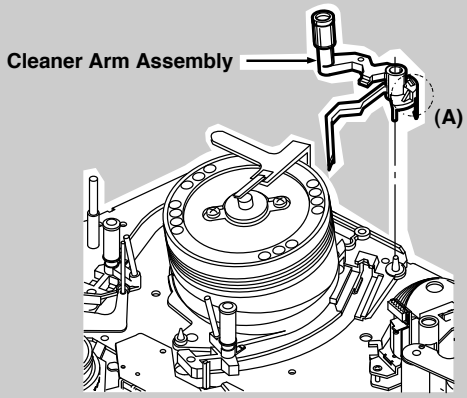


Fig. B-1 Auto head cleaner Assembly

2. Drum and Base Assembl (Fig. B-2)

1) Remove the Auto Head Cleaner Assembly. (option)
2) Remove three screws(A) and separate the Drum Assembly, Drum Base and the Drum Brush from the Deck Mechanism Assembly.
3) Remove three screws(B) on the back side and remove the Drum Assembly from the Drum Base.

NOTES:

When disassembling and reassembling:

a. Do not touch the video tips with fingers or tools.
Give special attention to disassembling and reassembling of Auto Head Cleaner Assembly.

b. After assembling, adjust the tape transport system and Servo PG.

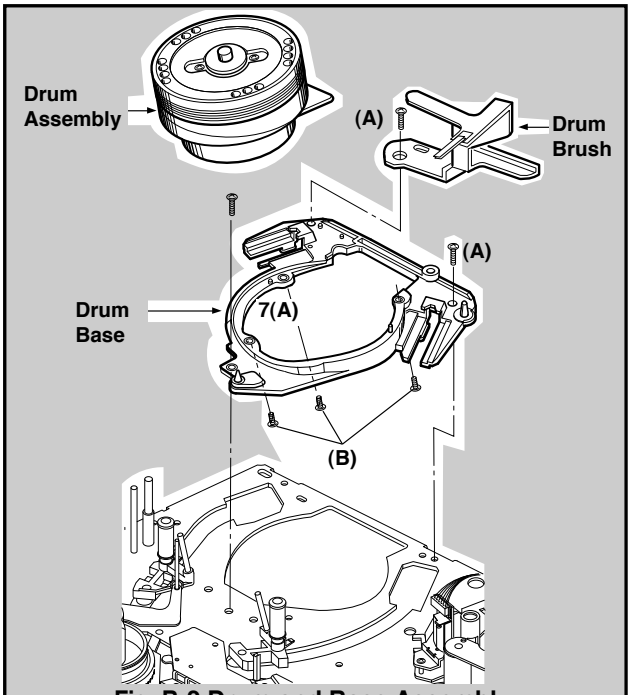


Fig. B-2 Drum and Base Assembly

3. Drum Sub Assembly and Motor Assembly (Fig. B-3-1)

1) Remove the Drum Base from the Deck Mechanism Assembly.
2) Separate the Drum Assembly from the Drum Base.
3) Remove two screws(A) and then remove the rotor.
4) Remove three screws(B) and then remove the stator.

NOTE

When disassembling and reassembling:

a. Do not touch the video tips with fingers or tools.

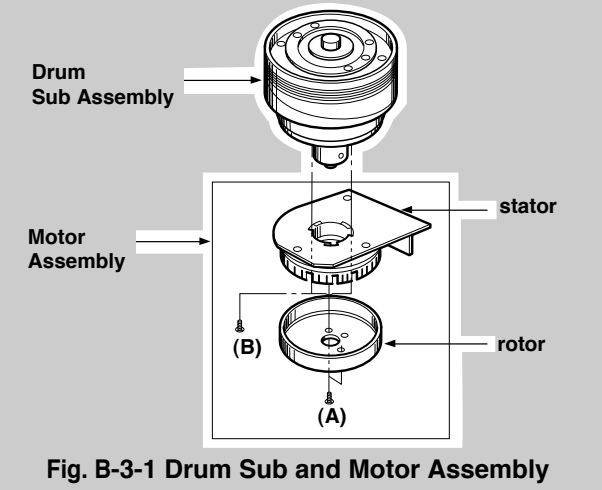


Fig. B-3-1 Drum Sub and Motor Assembly

4. A/C (Audio/Control) Head Assembly (Fig. B-4)

1) Unplug the A/C connector from the Loading Motor P.C.B.
2) Remove two screws(A) and remove the A/C Head Assembly from the Deck Mechanism Assembly.

NOTES:

When disassembling and reassembling:

a. When assembling, the 3mm hole of the Base A/C should coincide to 3mm hole in the Chassis.
b. Do not touch the A/C Head Tips with fingers or tools.
c. After reinstalling the Audio Control Head Assembly, adjust the Tilt, Azimuth and Height of A/C Head.

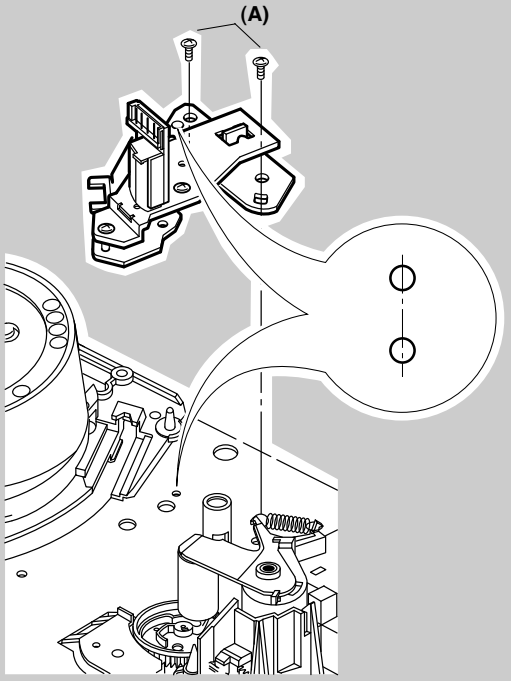


Fig. B-4 A/C Head Assembly

5. FE (Full Erase) Head Assembl (Fig. B-5) (Optional Item)

1) Push two tabs(A) and remove the FE Head.

NOTE

When disassembling and reassembling:

a. Be careful not to get any foreign substance on the FE Head.

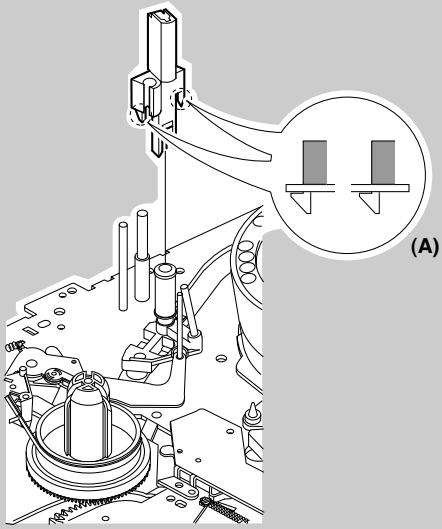


Fig. B-5 FE Head Assembly

6. Plate Up/Supply Main Brake/Take up Main Brake/Body Prism Led Assembly (Fig. B-6)

1) Plate Up
   a. Remove three screws(A) and remove the Plate Up.
2) Supply Main Brake
   a. Remove the Spring MB.
   b. Lift up the Supply Main Brake.
3) Take-Up Main Brake
   a. Lift up the Take-Up Main Brake.
4) Body Prism Led
   a. Remove the Body Prism Led.

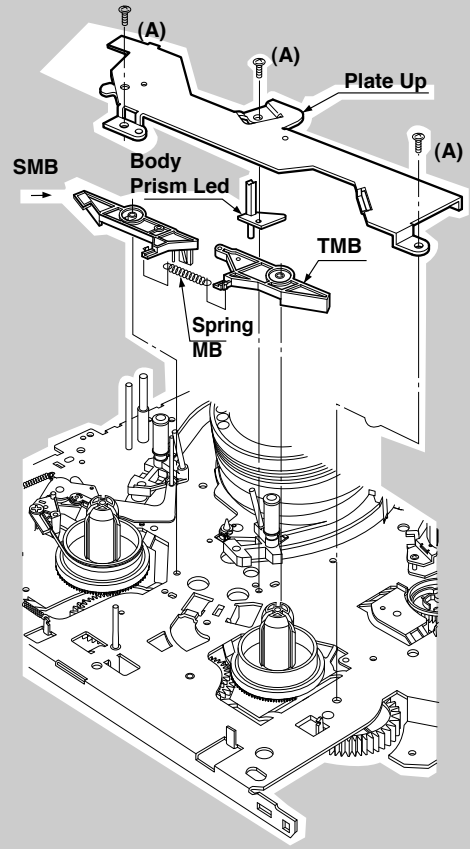


Fig. B-6 Plate up/SMB/TMB/BPL

7. Tension Arm/Lever Assembly Tension (Fig. B-7)

1) Remove the Spring Tension.
2) Push the tab(A) of the Base Tension on the back cover of the Deck Mechanism Assembly outward and remove the Tension Arm Assembly.
3) Push the tab(B) on the back side of the Holder Band(A) and remove the Tension Arm Assembly.
4) Push two tabs(C) on the bottom side of the Lever Tension and Lift up the Lever Assembly Tension.

NOTES:

When disassembling and reassembling:

a. (D) is engaged to the cam groove of the Gear Cam L/D and two tabs(C) are engaged in the chassis. (care must be taken not to damage the two tabs when disassembling and reassembling)

b. When disassembling, turn to the counterclockwise and lift up so that grease which may be on (D) is not transfered to the Reel Brake Drum.

c. When assembling, the 2.5mm hole of the Lever Assembly Tension should be aligned with the 2.5mm hole in the chassis.

d. After reassembling, adjust the Tension.

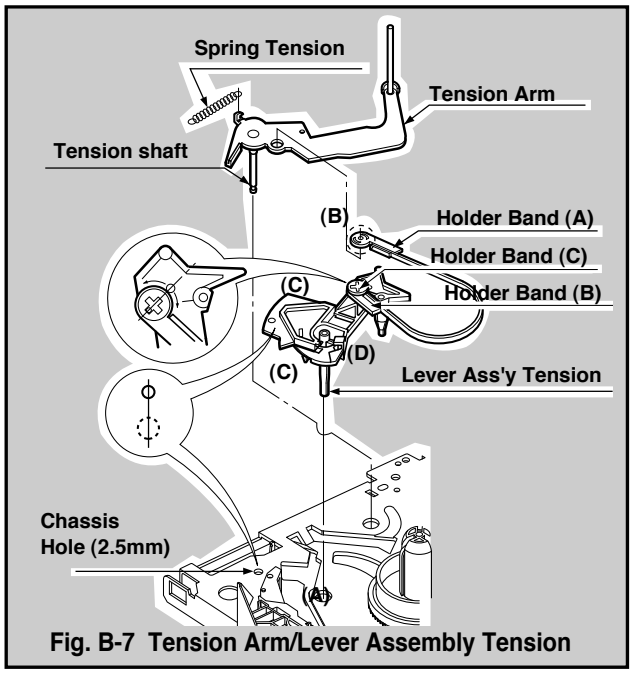


Fig. B-7 Tension Arm/Lever Assembly Tension

8. TAB Lever (Fig. B-8)

(Optional Item)

1) Remove the Lever Ass'y Tension.
2) Remove the Spring TAB.
3) Push the tab(A) on the bottom side of TAB Lever and remove the TAB Lever.

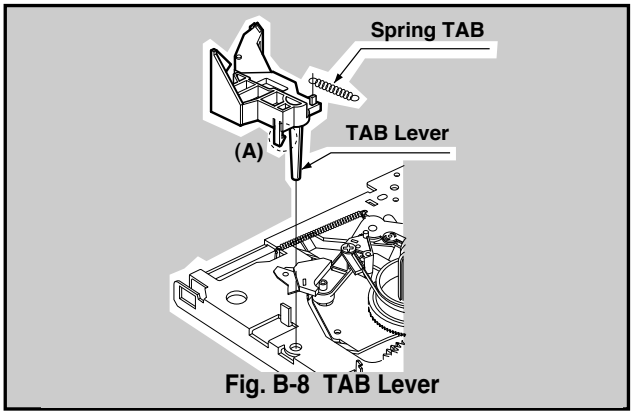


Fig. B-8 TAB Lever

9. Supply Reel/Take Up Reel Assembly (Fig. B-9)

1) Lift up Reel(S), (T) after removing the Plate Up and Band Assembly.

NOTES:

a. Be sure not to interchange the Take-up Reel and the Supply Reel.
b. Do not allow the Brake Drum to come in contact with grease.

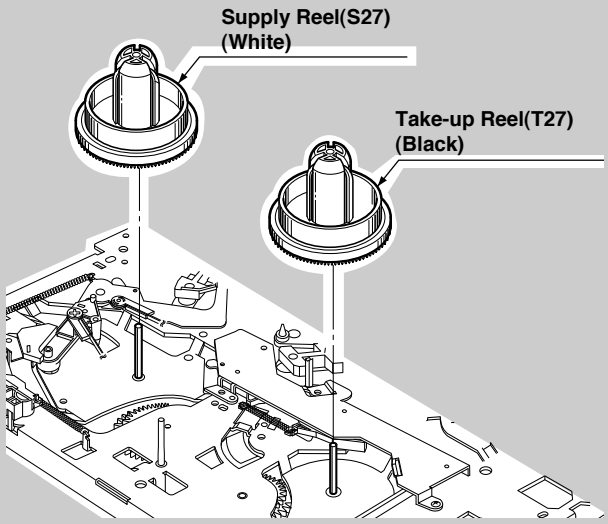


Fig. B-9 Supply Reel/Take-up Reel Assembly

10. Gear Pulley/Belt Capstan (Fig. B-10)

1) Turn over the Deck Mechanism Assembly.
2) Remove the Belt Capstan.
3) Remove the washer(A) and then lift up the Gear Pulley.

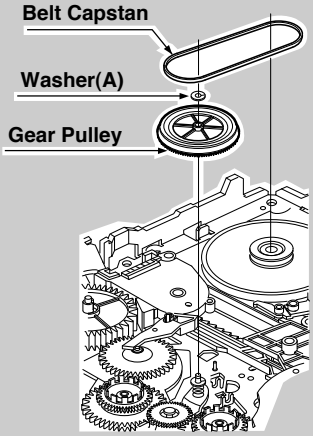


Fig. B-10 Gear Pulley/Belt Capstan

11. Gear H1, H2/Lever H1 (Fig. B-11)

1) Push and lift up the hook(B) of Lever H1.
2) Remove the washer(A) and then lift up the Gear H1.
3) Lift up the Spring H1.
4) Push and lift up the hook(B) of the Gear H2.

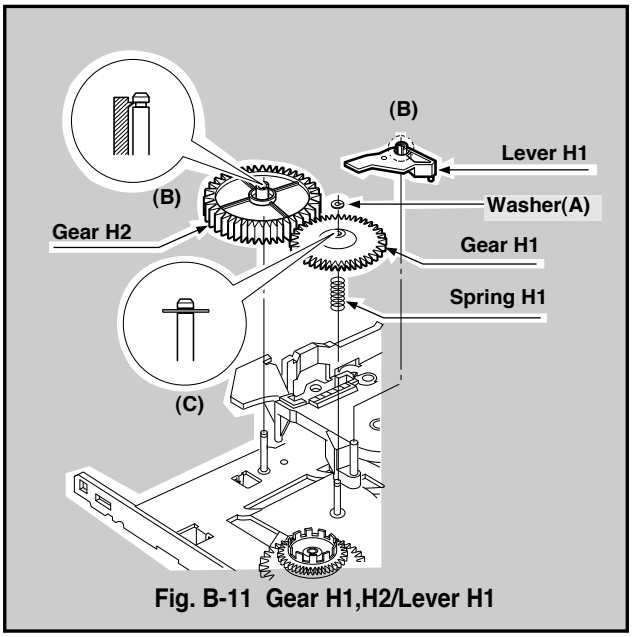


Fig. B-11 Gear H1,H2/Lever H1

12. Arm Assembly Idler (Fig. B-12)

1) Lift up the Gear Pulley after removing the washer(A).
2) Lift up the Spring Up/D after removing the washer(B).
3) Lift up the Arm Assembly Idler.

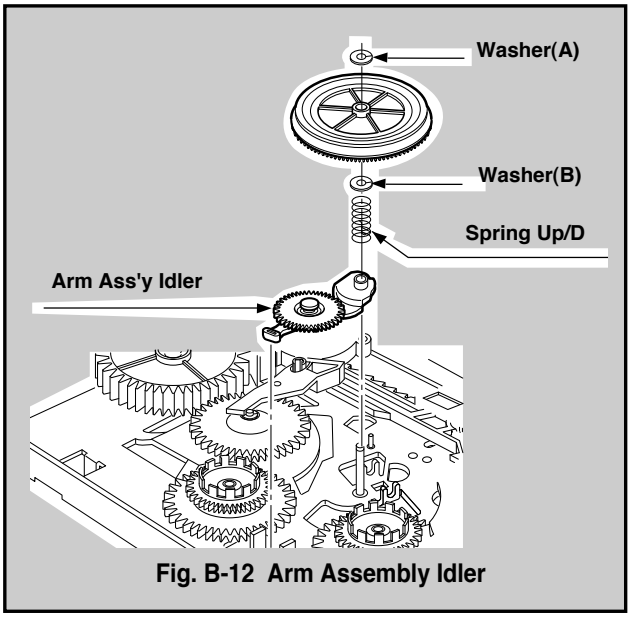


Fig. B-12 Arm Assembly Idler

13. Mode S/W (Fig. B-13)

1) Lift up the Lever H1.
2) Remove the screw(A) and lift up the Mode S/W.

NOTE

a. When assembling mode, the groove of Gear (∩) and Body (o) of the Mode Switch should be aligned.

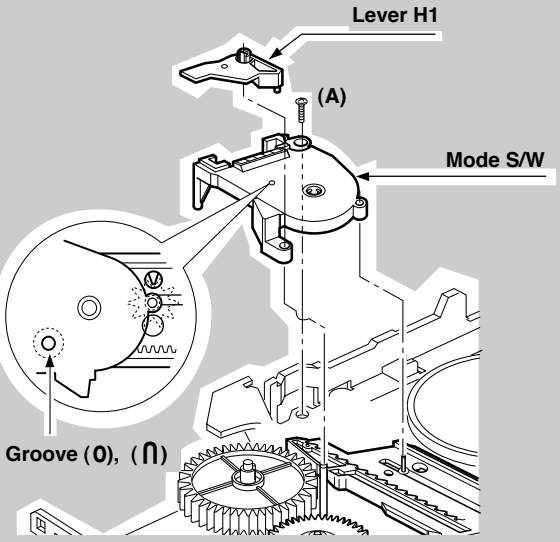


Fig. B-13 Mode S/W

14. Capstan Motor Assembly (Fig. B-14)

1) Remove three Screws(A) on the top side and remove the Capstan Motor Assembly.

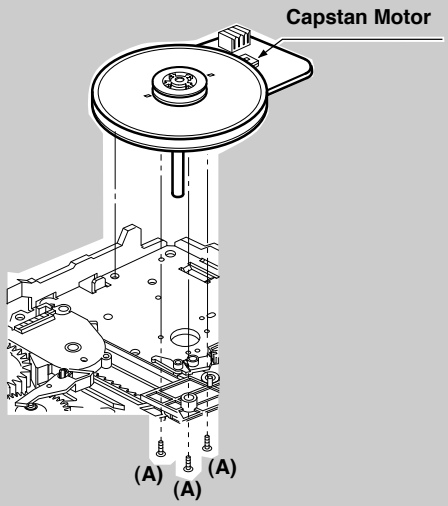


Fig. B-14 Capstan Motor Assembly

15. CAM Bracket Assembly (Fig. B-15)

1) Remove three screws(A).
2) Remove the CAM Bracket Assembly.

NOTE

a. The (Tension Shaft Holder) fixes the Tension Shaft on Fig B-7. therefore when the CAM Bracket Assembly is removed, First remove the Tension Arm on Fig B-7.

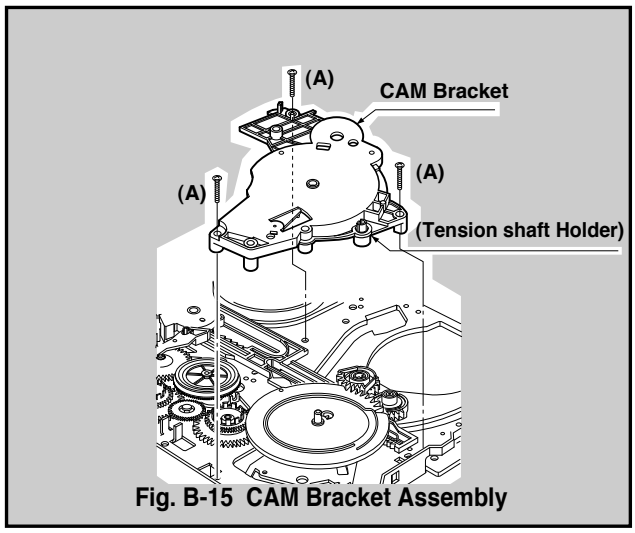


Fig. B-15 CAM Bracket Assembly

16. Cam Bracket/Lever Jog/Gear Jog (Fig. B-16) (Optional Item)

1) Remove the Cam Bracket Assembly.
2) Remove the Spring Jog.
3) Push the tab(A) and remove the Lever Jog.
4) Push the tab(B) and remove the Gear Jog.

NOTE

a. The tab(B) on the Gear Jog should be in groove of the Lever Jog.

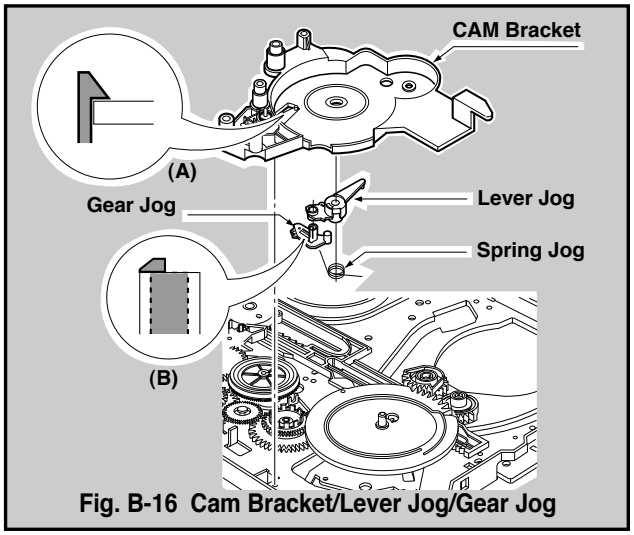


Fig. B-16 Cam Bracket/Lever Jog/Gear Jog

DECK MECHANISM DISASSEMB Y

17. Gear Cam L/D (Fig. B-17)

1) Remove the Cam Bracket Assembly.
2) Remove the Gear Cam L/D.

NOTE

1) When assembling the Gear Cam L/D, the groove (⋀⋀) of Plate Slider should coincide with to the groove (⋁) on the Gear Cam L/D.

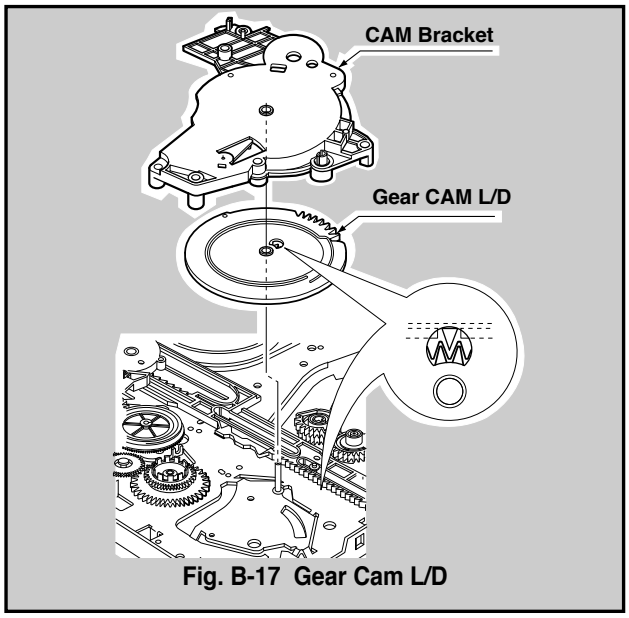


Fig. B-17 Gear Cam L/D

18. Gear PS/Plate Slide (Fig. B-18)

1) Remove two washers(C).
2) Remove the Plate Slider.
3) Remove the Gear PS.

NOTE

1) When the hole(A) of the Gear PS is aligned to the hole(B) of the chassis, the groove(⋁) of the Plate Slider should be aligned to the groove(⋀⋀) of the Gear PS.

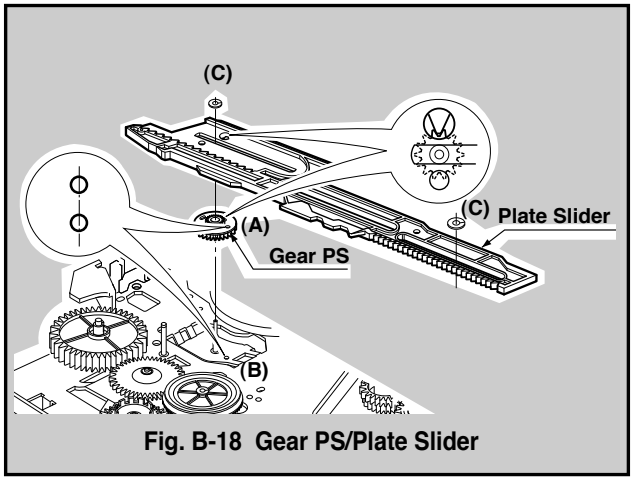


Fig. B-18 Gear PS/Plate Slider

19. Gear Assembly P2/P (Fig. B-19)

1) Remove the Plate Slider.
2) Remove by pushing one hook(B) on the top side of Gear Assembly P3.
3) Remove by pushing one hook(A) on the top side of Gear Assembly P2.

NOTES:

When disassembling and reassembling:
a. The P2 and P3 Gear Assembly should not be interchanged.
b. The groove(⋁),of Gear P2 should be aligned to the groove(⋀⋀) of Gear P3.
c. Set the hole of Lever to the Boss of P2 and P3 Base Assembly.
(When assembling make sure that the Lever is not bent.)

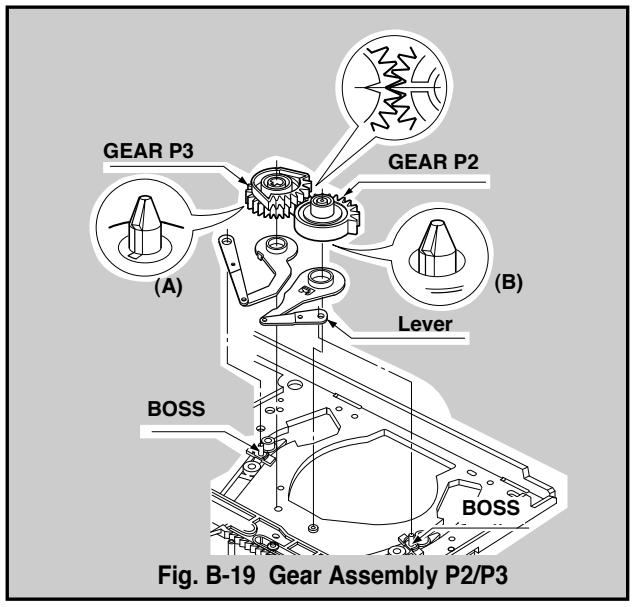


Fig. B-19 Gear Assembly P2/P3

20. Base Assembly P2/P (Fig. B-20)

1) Remove the P2/P3 Gear Assembly.
2) Remove the P2/P3 Base Assembly.

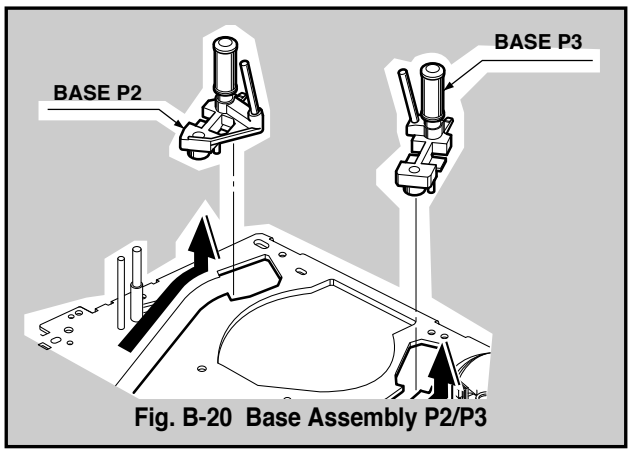


Fig. B-20 Base Assembly P2/P3

DECK MECHANISM DISASSEMBLY

21. Guide Roller Assembly (Fig. B-21)

1) Remove two screws(A).
2) Remove the Guide Roller From the Base P2/P3 by turning it.

NOTE

When disassembling and reassembling:
a. The P2 and P3 Base should not be interchanged.

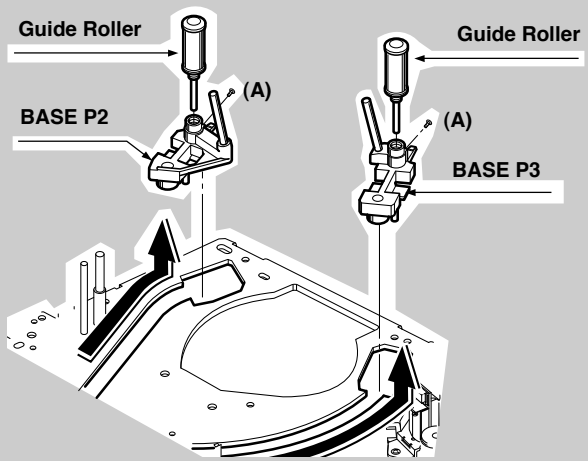


Fig. B-21 Guide Roller Assembly

22. Clutch Assembly S2 (Fig. B-22)

1) Remove the Gear Cam L/D and the Arm Assembly Idler.
2) Remove the washer(A).
3) Remove the Clutch Assembly S27.

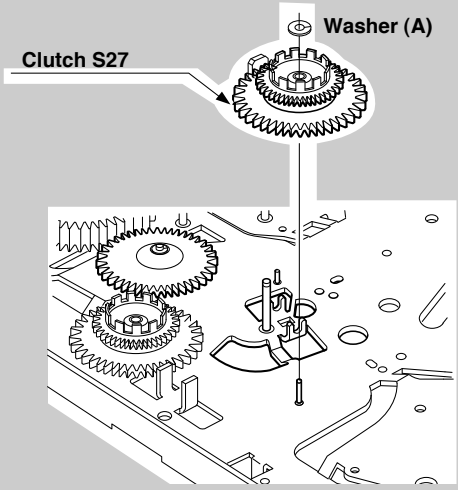


Fig. B-22 Clutch Assembly S27

23. Clutch Assembly T2 (Fig. B-23)

1) Remove the Gear H1 and Arm Assembly Idler.
2) Remove the washer(A).
3) Remove the Clutch Assembly T27.

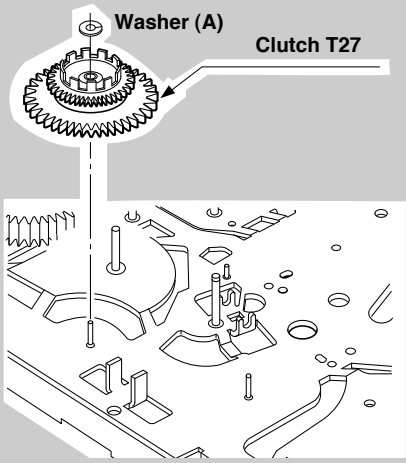


Fig. B-23 Clutch Assembly T27

24. Lever F/R & Arm F/R (Fig. B-24)

1) Remove the Plate Slider.
2) Remove the washer(A).
3) Remove the Lever F/R.
4) Remove the Arm Assembly Idler.
5) Remove the Arm F/R.

NOTE

1) When disassembling the Arm F/R should be horizontal.

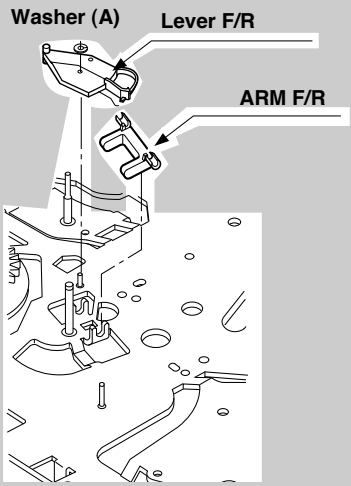


Fig. B-24 Lever F/R & Arm F/R

25. Holder Pinch Assembly (Fig. B-25)

1) Separate the Holder Pinch Assembly by pushing tab(A) on the L/D Motor Bracket in the direction of arrow (B).

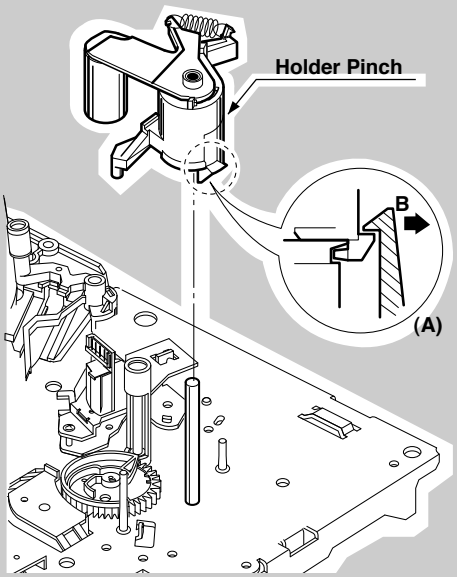


Fig. B-25 Holder Pinch Assembly

26. Pinch Arm Assembly (Fig. B-26)

1) Remove the Spring Pinch.
2) Remove the Pinch Arm Assembly by turning it counterclockwise.

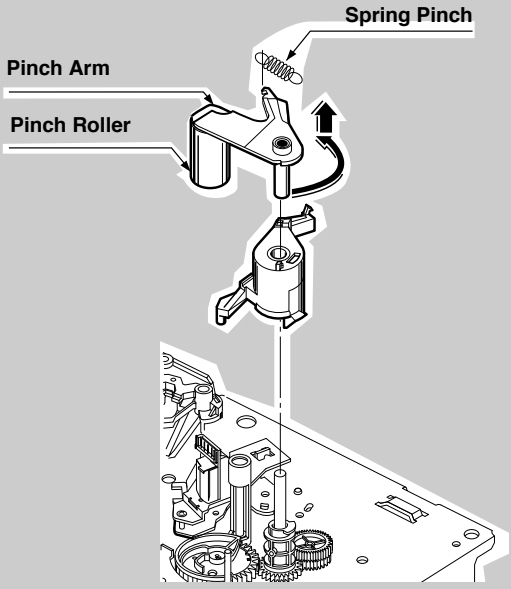


Fig. B-26 Pinch Arm Assembly

27. L/D Motor Bracket Assembly (Fig. B-27)

1) Remove three Screws(A).
2) Push the tabs(A) and remove the L/D Motor Bracket Assembly.

NOTES:

When assembling and disassembling:

a. Make sure Grease from the Gear Pinch does not come in contact with the wing of the L/D Motor Bracket.

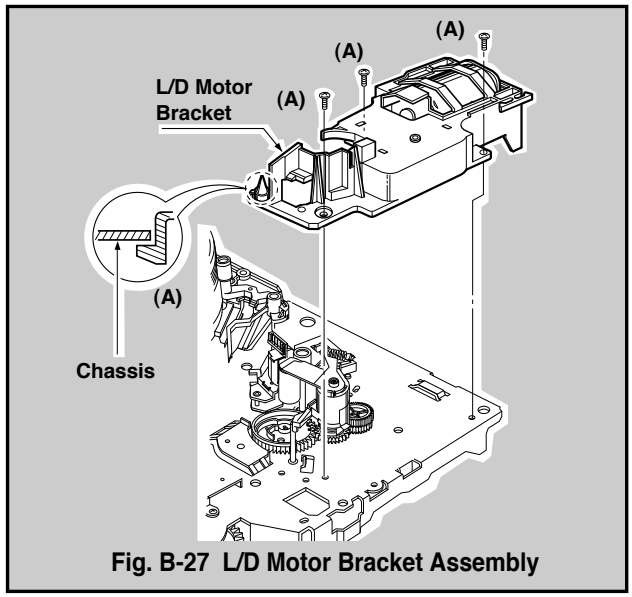


Fig. B-27 L/D Motor Bracket Assembly

28. Worm Wheel (Fig. B-28)

1) Remove the L/D Motor Bracket Assembly.
2) Push two Tabs(A) on the L/D Motor Bracket and then remove it.

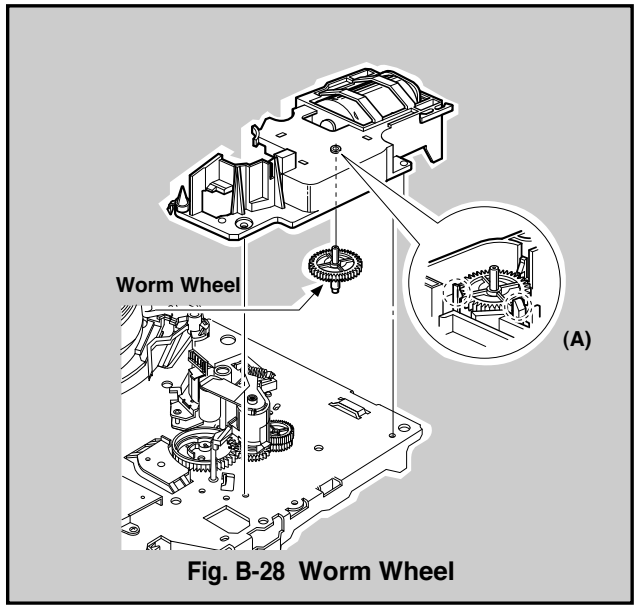


Fig. B-28 Worm Wheel

29. L/D Motor Assembly & Worm L/D Motor & L/D Motor Bracket (Fig. B-29)

1) Remove the L/D Motor Bracket Assembly.
2) Push the L/D Motor Assembly in lower direction and then remove.
3) Remove the Worm L/D Motor from the L/D Motor Assembly in the direction of arrow (A).
4) Remove the L/D Motor Assembly and the Worm L/D Motor and then L/D Motor Bracket is removed.

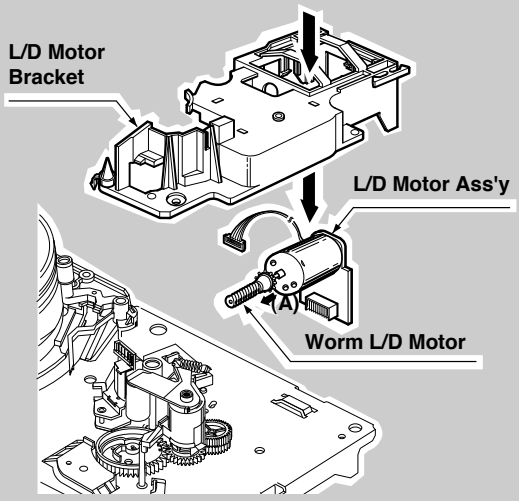


Fig. B-29 L/D Motor Assembly/ Worm L/D Motor/ L/D Motor Bracket

30 . Gear CNT (Fig. B-30)

1) Remove the L/D Motor Bracket Assembly.
2) Remove the Pinch Arm Assembly.
3) Remove the Gear CNT.

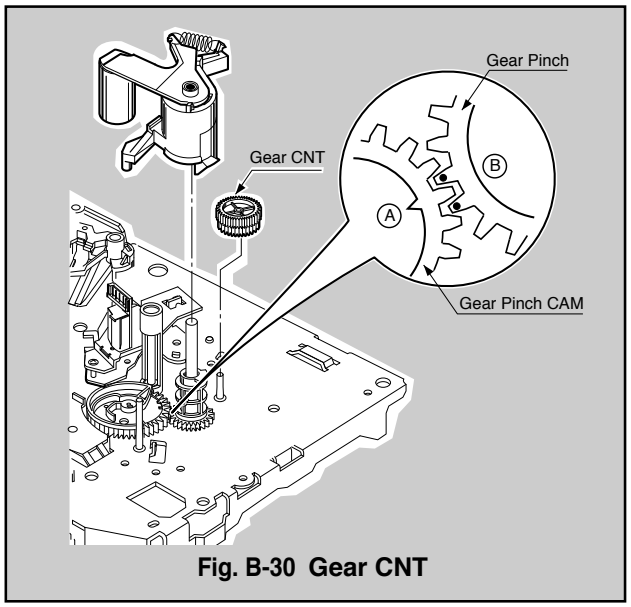


Fig. B-30 Gear CNT

31. Gear Pinch (Fig. B-31)

1) Remove the Pinch Arm Assembly.
2) Remove the Gear CNT.
3) Remove the Gear Pinch.
4) When reassembling, make sure that the two teeth, Gear pinch CAM(£) and Gear pinch(£), with timing marks line up with the arrow at two o'clock on the Pinch Cam Gear. (See Fig on B-30)

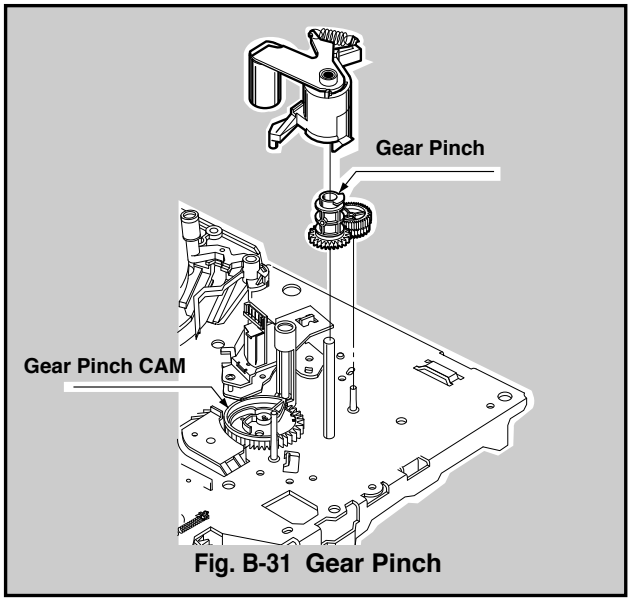


Fig. B-31 Gear Pinch

32. T/Up Arm Assembly (Fig. B-32)

1) Remove the L/D Motor Bracket Assembly.
2) Turn over the T/Up spring and separate the T/Up Arm Assembly.
3) Remove the spring.

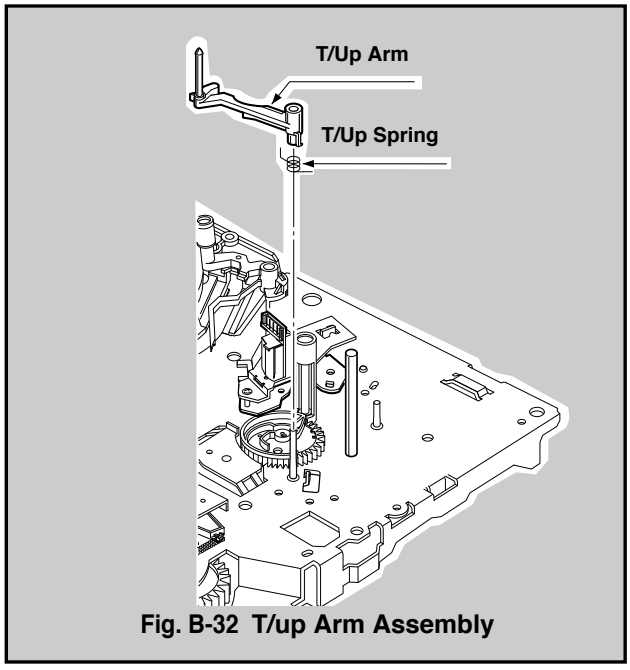


Fig. B-32 T/up Arm Assembly

33. Gear Pinch Cam (Fig. B-33)

1) Remove the T/Up Arm Assembly.
2) Remove by pushing one tab(A) on the bottom side of the Gear Pinch Cam.

NOTE

When disassembling and reassembling:

a. The small hole on the Gear Pinch Cam and hole of chassis should be aligned.

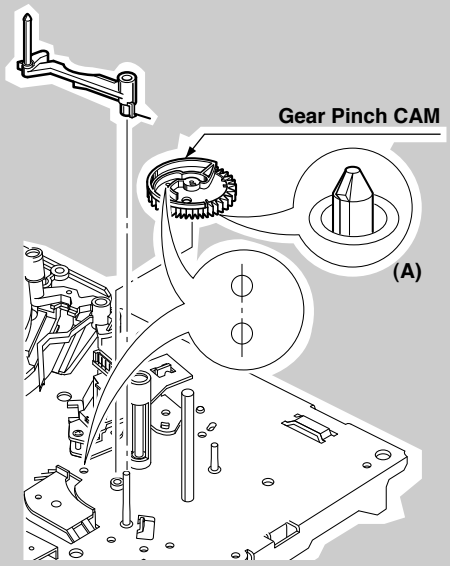
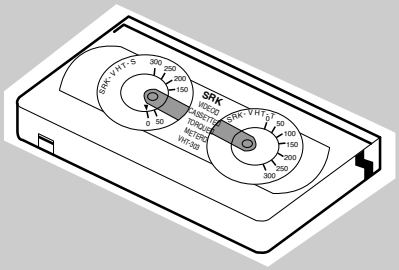
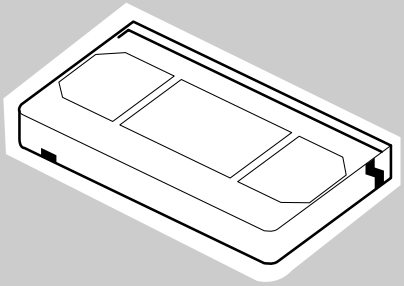
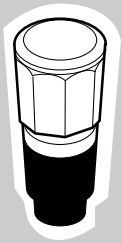
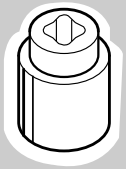
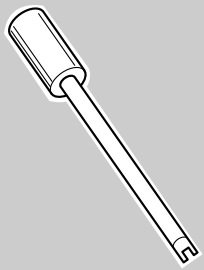
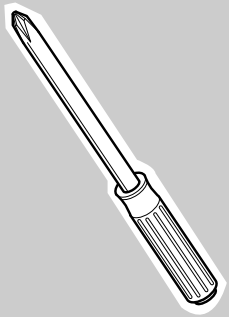


Fig. B-33 Gear Pinch Cam

MECHANISM ADJUSTMENT

¡ Tools and Fixtures for Deck

1. Cassette Torque meter **Parts No: D00-D006** 	**2. Alignment tape** **Parts No NTSC: DTN-0001** **PAL: DTN-0002** 	**3. Torque gauge** **Parts No: D00-D002** 
4. Torque gauge adaptor **Parts No: D09-R001** 	**5. Post height adjusting driver** **Parts No: DTL-0005** 	**6. + Type driver (ø5)** **Obtain locally** 

MECHANISM ADJUSTMENT

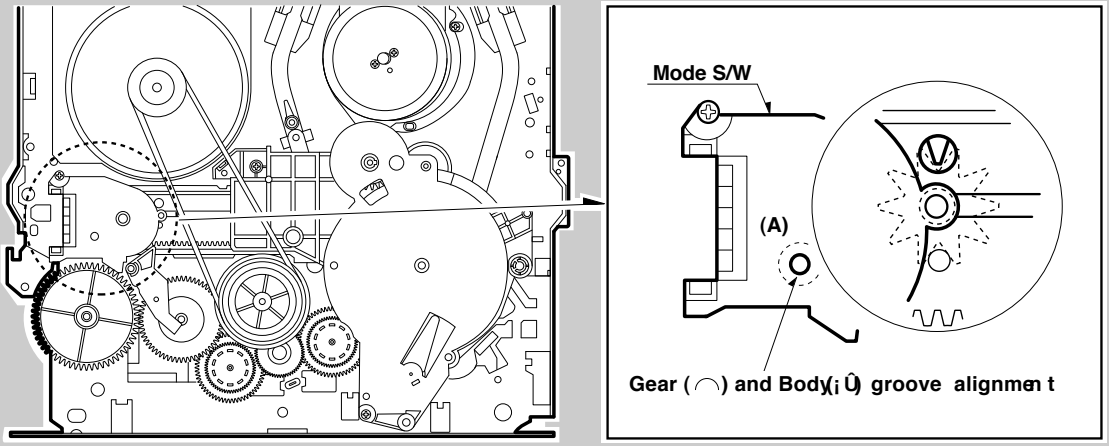
1. Mechanism and Mode Switch Alignment Check

Purpose : To determine if the mode switch and mechanism are in the correct position, when a tape is ejected from the loading mechanism.

Test Equipment / Fixture	Test Conditions VCR (VCP) State	Check Point
* Blank tape	* Eject Mode (with cassette ejected)	* Mechanism and Mode Switch Position

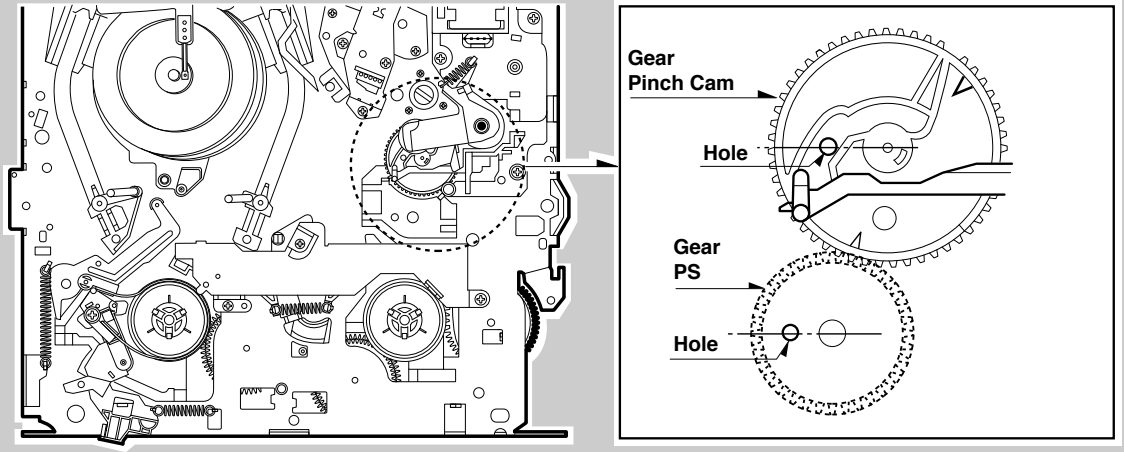
1) Turn power on and eject the cassette by pressing the eject button.
2) Remove the top and bottom covers.
3) Visually check the alignment of the Pinch Cam gear and PS gear holes, line up with holes in the chassis (figure C-2).
4) If the gears in step 3 do not align as indicated, then rotate the shaft of the loading motor to either the clockwise or counterclockwise direction until alignment does occur.
5) Turn the unit over and remove the main P.C.B thus exposing the bottom side of the deck mechanism.
6) Check the alignment of the mode switch as illustrated in figure C-1, (A).
7) If the alignment is incorrect then remove the mode switch and align as shown in figure C-1 with out changing the position of the Pinch Cam gear and PS gear.
8) Remount the mode switch and main P.C.B assembly and check operation.

CHECK DIAGRAM



BOTTOM VIEW

Fig. C-1



TOP VIEW

Fig. C-2

2. Preparation for Adjustment (To set VCR (VCP) to the loading state without inserting a cassette.)

1) Unplug the Power Cord from the AC outlet.
2) Separate the Top Cover and Front Loading Mechanism.
3) Plug the Power Cord into the AC outlet.
4) Turn the VCR on and push the tact switch in the P.C.B. Assembly.
   The VCR can accept inputs for each mode in this case. However the rewind and review operation cannot be performed for more than a few seconds because the take-up reel table is in the stop state and reel pulses cannot be detected.

NOTE

Cover the holes in the end sensors with black tape to prevent a light leak.

NOTES:

Always return the VCR(VCP) to the Front Loading Mechanism Assembly State in the following order after the above operations have been performed.

1) Press the Eject button after turning the power ON.
2) Wait for about 10 seconds until searching out the assembly position.
3) Assemble the Front Loading Mechanism and connect the Front Loading Mechanism Connector.
4) Refer to the "Front Loading Mechanism Disassembly" Section.

3. Tension Post Position and Tension Adjustment

Purpose : To insure uniform tape contact with the video head by maintaining constant tape tension.

Test Equipment / Fixture	Test Conditions VCR(VCP) State	Adjustment Point
* Cassette Torque Meter (For play 100g/cm)	* Position Adjustment: Play without a cassette * Tension Check: Play	* Holder Band B and C

Position Adjustment

1) Remove cassette.
2) Adjust the position of tension post in accordance with figure C-3.

NOTE

Align the Tension Post (2mm) to the hole in the Chassis (2.5mm).

Tension Adjustment

1) Turn on VCR and load the cassette torque meter.
2) Press the play button and observe the torque tension on the supply reel (spec. 37g/cm+5g/cm).
3) If torque is out of spec. then use a Phillips screw driver and move the screw head located in the center of the B and C band hold; to either the right or left until correct torque is indicated.

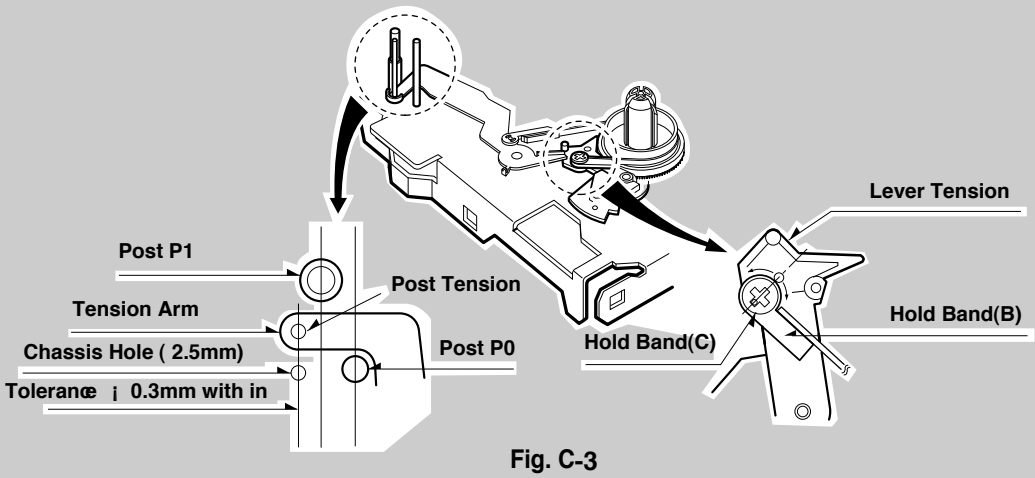


Fig. C-3

4. Checking Torque

Purpose : To insure smooth transport of the tape during each mode of operation. If tape transport is abnormal, then check the torque as indicated by the chart below.

Test Equipment / Fixture	Test Conditions VCR(VCP) State
* Torque Gauge(600 g/cm ATG) * Torque Gauge Adaptor * Cassette Torque Meter V NTSC: 16.67msec PAL: 20msec	* Set the VCR to each operating mode without inserting a cassette. (See '2. Preparation for Adjustment'. Page 4-17)

Item	Mode	Test Equipment	Measurement Reel	Measurement Values
Slack Removal Torque	Unloading	Cassette Torque Meter	Supply Reel	More than 150~270g/cm
Fast Forward Torque	Fast Forward	Cassette Torque Gauge	Take-Up Reel	More than 500g/cm
Rewind Torque	Rewind	Cassette Torque Gauge	Supply Reel	More than 500g/cm
Play Take-Up Torque	Play	Cassette Torque Meter	Take-Up Reel	55~95g/cm
Review Torque	Review	Cassette Torque Meter	Supply Reel	170~250g/cm

Checking Method:
The Values are measured by using a torque gauge and torque gauge adaptor with the torque gauge affixed.

NOTE

The torque reading to measure occurs when the tape abruptly changes direction from fast forward or rewind mode, when quick braking is applied to both reels.

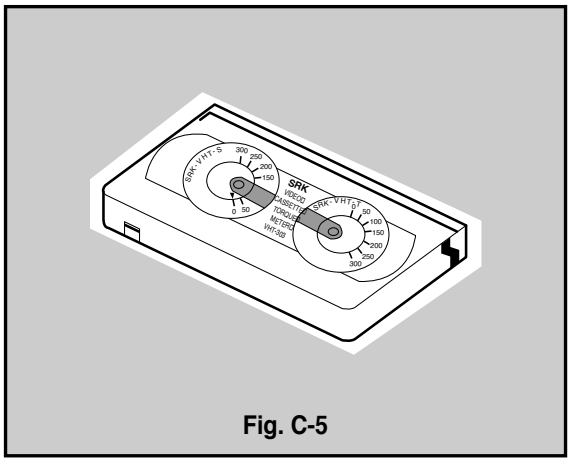


Fig. C-5

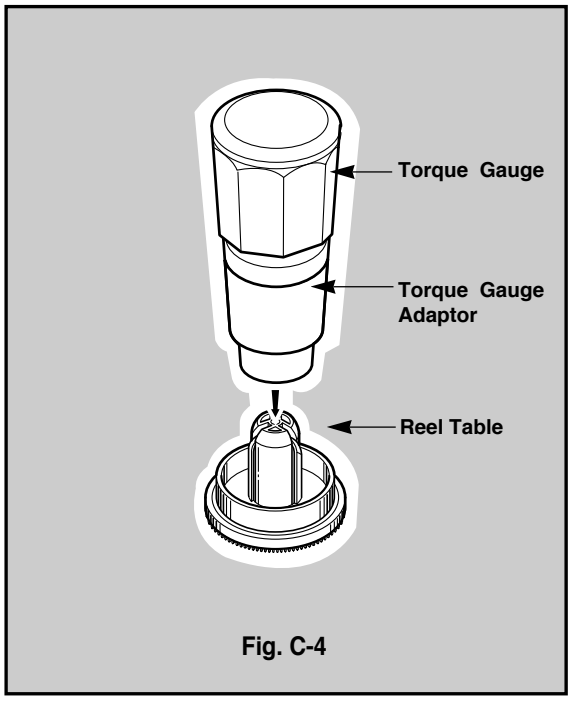


Fig. C-4

MECHANISM ADJUSTMENT

5. Guide Roller Height Adjustment

Purpose : To regulate the height of the tape so that the bottom of the tape runs along the tape guide line on the lower drum.

A. Preliminary Adjustment

Test Equipment / Fixture	Test Conditions VCR(VCP) State	Adjustment Point
* Post Height Adjusting Driver * Hexagonal Wrench or Allen Wrench Phillips screw driver	* Allows a good tape to play normally in spite of a damaged guide roller.	* Guide Roller Height Adjustment screws on the Supply and Take-Up Guide Rollers.

Adjustment Procedure

1) Perform the precise adjustment(See below B).
2) If the Guide Roller is damaged, loosen the Guide Roller retaining screw and replace the Guide Roller.
3) Adjust the height of P2, P3 so that TAPE is adjacent to the guide line.

ADJUSTMENT DIAGRAM

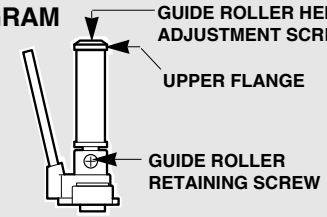


Fig. C-5-1

B. Precise Adjustment

Test Equipment / Fixture	Test Equipment Connection Points	Test Conditions VCR(VCP) State	Adjustment Point
* Oscilloscope * Alignment Tape * Post Height Adjusting Driver	* CH-1: PB RF Envelope * CH-2: NTSC: SW 30Hz PAL : SW 25Hz * Head Switching Output Point * RF Envelope Output Point	* Play an alignment tape	* Guide Roller Height Adjustment Screws.

Adjustment Procedure

1) Play an alignment tape after connecting the probe of the oscilloscope to the RF Envelope Output Test Point and Head Switching Output Test Point.
2) Tracking Control (in PB mode): Center position (When this adjustment is performed after the drum assembly has been replaced, set the tracking control so that the RF output is maximum.)
3) Height adjustment screw: Flatten the RF waveform. (Fig. C-5-2)
4) Turn (Move) the tracking control (in the Playback mode) clockwise and counterclockwise. (Fig. C-5-3))
5) Check that any drop of RF output is uniform at the start and end of the waveform.

CAUTION

If the adjustment is excessive or insufficient the tape will jam or fold.

Waveform Diagrams

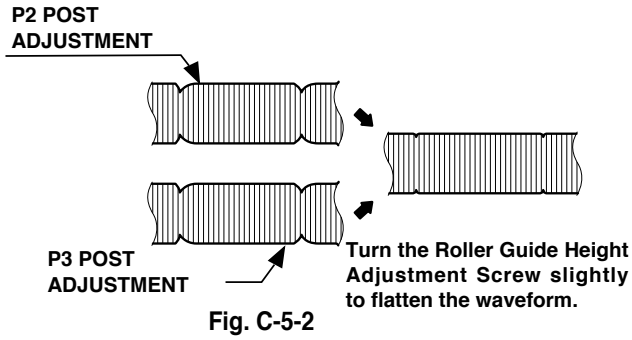


Fig. C-5-2

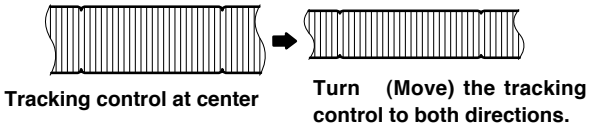
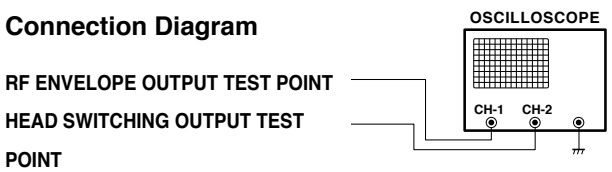


Fig. C-5-3

Connection Diagram



MECHANISM ADJUSTMENT

6. Audio/Control (A/C) Head Adjustment

Purpose : To insure that the tape passes accurately over the audio and control tracks in exact alignment in both the record and playback modes.

A. Preliminary Adjustment (Height and tilt adjustment)
Perform the Preliminary adjustment, when there is no Audio Output signal with a blank tape.

Test Equipment / Fixture	Test Conditions VCR(VCP) State	Adjustment Points
* Blank Tape * Screw Driver(+) Type 5mm	* Play the blank tape (CTL Tape)	* Tilt Adjustment Screw(C) * Height Adjustment Screw(B) * Azimuth Adjustment Screw(A)

Adjustment Procedure / Diagrams

1) Initially adjust the A/C head assembly as shown in figure C-6-1, by using the height adjustment screw(B).
2) Play a blank tape and observe if the tape passes accurately over the A/C head without tape curling or folding.
3) If folding or curling does occur then adjust the Tilt adjusting screw(C) while the tape is running to resemble figure C-6-3.
4) Confirm that the tape passes over the A/C head assembly as indicated by proper audio reproduction and proper tape counter performance.

NOTE

Ideal A/C head height occurs, when the tape runs between 0.2~0.25mm above the bottom edge of the A/C head core.

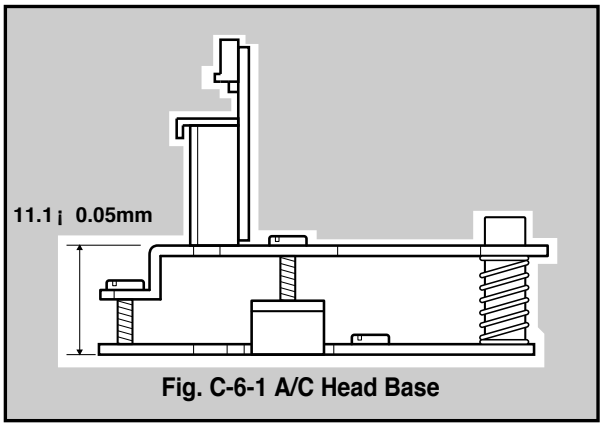


Fig. C-6-1 A/C Head Base

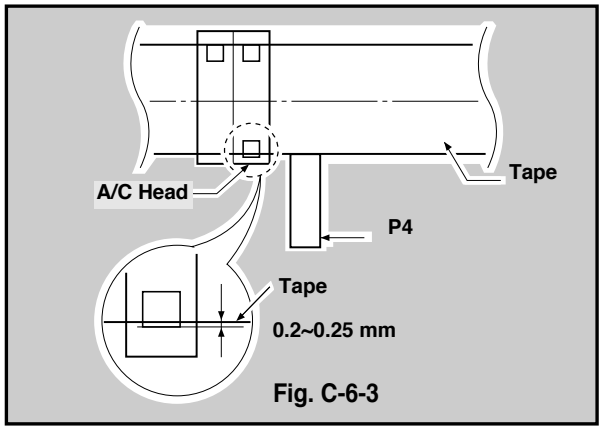


Fig. C-6-3

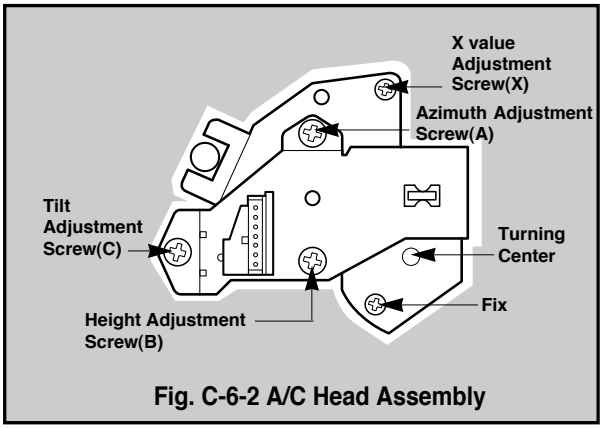


Fig. C-6-2 A/C Head Assembly

B. Confirm that the tape passes smoothly between the T/UP guide and the Pinch Roller (Using a mirror or the naked eye).

1) After completing step A. (Preliminary Adjustment), check that the tape passes around the T/UP post without folding at the top or bottom.
   If folding is observed, due the following:
   a. If folding is observed at the lower part of the T/UP post, then slowly turn the tilt adjustment in the clockwise direction to eliminate tape the curling.
   b. If folding is observed at the upper part of the T/UP post, then slowly turn the tilt adjustment in the counterclockwise direction to eliminate the tape curling.

C. RF Fine Adjustment (only if the RF waveform differs from figure C-5-3).

1) Check the RF Envelope after confirming smooth tape transport path at the T/UP Guide/Pinch Roller.

D. Precise Adjustment (Azimuth adjustment)

Test Equipment / Fixture	Test Equipment Connection Point	Test Conditions VCR (VCP) State	Adjustment Points
* Oscilloscope * Alignment tapes * Screw Driver(+) Type 5mm	* Audio output jack	* Play an alignment tape 1KHz, 7KHz sections.	* Azimuth Adjustment Screw(A) * Tilt Adjustment Screw(C)

Adjustment Procedure

1) Connect the probe of oscilloscope to Audio Output Jack.
2) Alternately adjust the Azimuth adjustment screw(A) and the Tilt adjustment screw(C) for maximum output of the 1KHz and 7KHz segments, while maintaining the flattest envelope differential between the two frequencies.

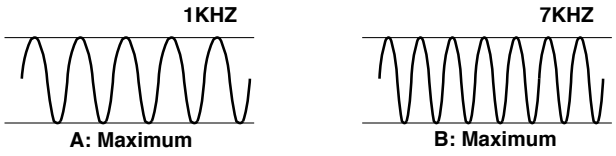
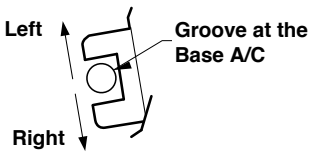


Fig. C-6-4

7. X-Value Adjustment

Purpose : To obtain compatibility with other VCR(VCP).

Test Equipment / Fixture	Test Equipment Connection Point	Test Conditions VCR (VCP) State	Adjustment diagrams
* Oscilloscope * Alignment tapes * Screw Driver(+) Type 5mm * Post Height Adjusting Driver	* CH-1: PB RF Envelope * CH-2: NTSC: SW 30Hz PAL : SW 25Hz * Head Switching Output Test Point * RF Envelope Output Test Point	* Play an alignment tape	

Adjustment Procedure

1) Loosen the fixed mounting and X Value adjustment screw.
2) Allow the mechanism to run long enough for auto tracking to complete it's cycle.
3) Move the A/C base laterally in the direction as shown in the diagram to find the center of the peak that allows for the maximum waveform envelope. This method should allow the 30um head to be centrally located over the 60um tape track.
4) Tighten the A/C head assembly mounting screws.

Adjustment Diagram

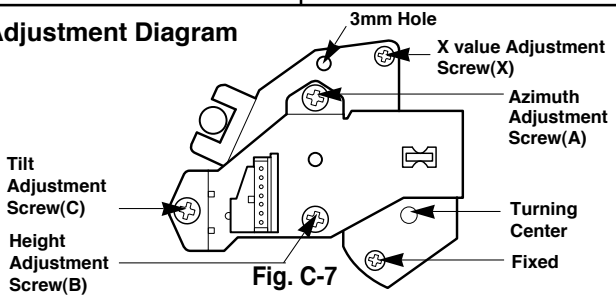
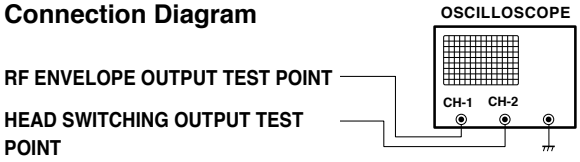


Fig. C-7

Connection Diagram



MECHANISM ADJUSTMENT

8. Adjustment after Replacing Drum Assembly (Video Heads)

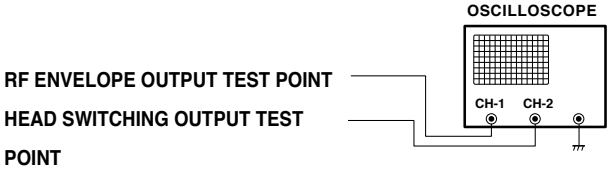
Purpose : To correct for shift in the roller guide and X value after replacing the drum.

Test Equipment / Fixture	Test Equipment Connection Points	Test Conditions VCR (VCP) State	Adjustment Points
* Oscilloscope * Alignment tape * Blank Tape * Post Height Adjusting Driver * Screw Driver(+) Type 5mm	* CH-1: PB RF Envelope * CH-2: NTSC: SW 30Hz PAL : SW 25Hz * Head Switching Output Test Point * RF Envelope Output Test Point	* Play the blank tape * Play an alignment tape	* Guide Roller Precise Adjustment * Switching Point * Tracking Preset * X-Value

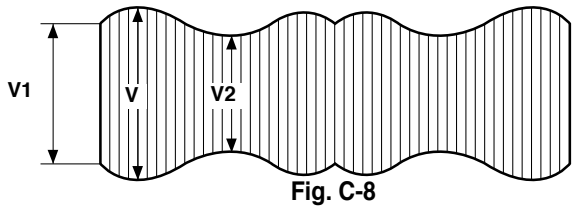
Checking/Adjustment Procedure

Play a blank tape and check for tape curling or creasing around the roller guide. If there is a problem then follow the procedure 5. "Guide Roller Height" and 6. "Audio Control(A/C) Head Adjustment".

Connection Diagram



Waveform



V1/V MAX §[0.7
V2/V MAX §[0.8
RF ENVELOPE OUTPUT POINT

Fig. C-8

9. Check the Tape Travel after Reassembling Deck Assembly.

9-1. Check Audio and RF Locking Time during playback and after CUE or REV (FF/REW)

Test Equipment / Fixture	Specification	Test Equipment Connection Points	Test Conditions VCR (VCP) State
* Oscilloscope * Alignment tape (with 6H 3kHz Color Bar Signal) * Stop Watch	* RF Locking Time: Less than 5 sec. * Audio Locking Time: Less than 10 sec.	* CH-1: PB RF Envelope * CH-2: Audio Output * RF Envelope Output Point * Audio Output Jack	* Play an alignment tape (with 6H 3kHz Color Bar Signal)

Checking Procedure

Play an alignment tape then change the operating mode to CUE or REV and confirm if the unit meets the above listed specifications.

NOTES:

1) CUE is fast forward mode (FF)
2) REV is the rewind mode (REW)
3) Referenced to the Play mode

9-2. Check the condition between the Audio and Video Sync. (Lip Sync.)

Test Equipment / Fixture	Specification	Test Equipment Connection Points	Test Conditions VCR(VCP) State
* Oscilloscope * Alignment Tape	* Less than¡ ¾V	* CH-1: PB RF Envelope * CH-2: Audio Output * RF Envelope Output Point * Audio Output Jack	* Play an alignment tape

Checking Procedure

1) Confirm that the period ¨Í in Fig. C-9-1 is within ¡¾V.
2) If the result is abnormal, repeat adjustment #7. (X-Value adjustment)

V ┌ NTSC: 16.67msec
V └ PAL: 20msec

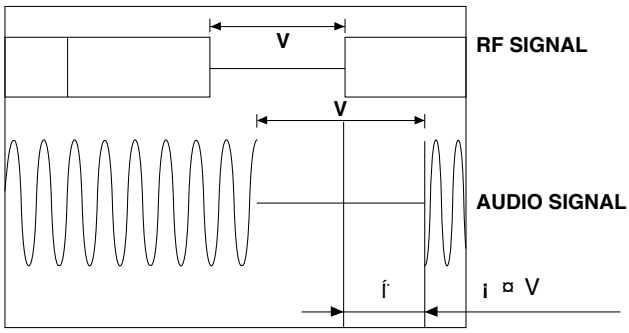


Fig. C-9-1

9-3. Check for tape curling or jamming

Test Equipment / Fixture	Specification	VCR(VCP) State
* T-160 Tape * T-120 Tape	* Be sure there is no tape jamming or curling at the begining, middle or end of a T-160 tape.	* Run the CUE, REV play mode at the beginning and the end of the tape.

Checking Procedure

1) Confirm that the tape runs smoothly around the roller guides, drum and A/C head assemblies while abruptly changing operating modes from Play to CUE or REV. This is to be checked at the begining, middle and end sections of the cassette.
2) Confirm that the tape passes over the A/C head assembly as indicated by proper audio reproduction and proper tape counter performance.

10. Maintenance/Inspection Procedure

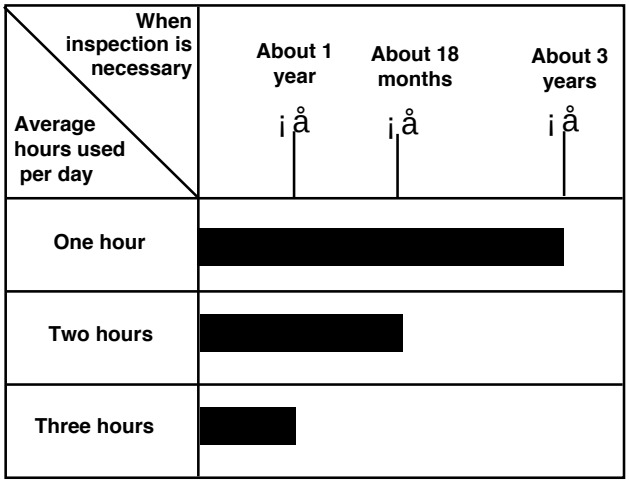
1) Required Maintenance

The recording density of a VCR(VCP) is much higher than that of an audio tape recorder. VCR(VCP) components must be very precise, at tolerances of 1/1000mm, to ensure compatiblity with other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure a good picture, periodic inspection and maintenance, including replacement of worn out parts and lubrication, is necessary.

2) Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR(VCP), and the environment in which the VCR(VCP) is used.
But, in general home use, a good picture will be maintained if inspection and maintenance is made every 1,000 hours. The table below shows the relation between time used and inspection period.

Table 1



3) Check before starting repairs

The following faults can be remedied by cleaning and oiling. Check the needed lubrication and the conditions of cleanliness in the unit.
Check with the customer to find out how often the unit is used, and then determine that the unit is ready for in spection and maintenance. Check the following parts.

Tabel 2

Phenomenon	Inspection
Poor S/N, no color	Dirt on video head or worn video head
Tape does not run or tape is slack	Dirt on pinch roller, belt or flywheel belt
Vertical jitter, horizontal jitter	Dirt on video head or in tape transport system
Color beats	Dirt on full-erase head
Low volume or distorted audio	Dirt on audio/control head
No Fast forward or rewind or rotation is slow	Dirt on belt

4) Supplies Required for Inspection and Maintenance

(1) Grease Kanto G-311G or equivalent
(2) Isopropyl Alcohol or equivalent
(3) Cleaning Patches

5) Maintenance Procedure
5-1) Cleaning

(1) Cleaning video head
First use a cleaning tape. If the dirt on the head is too stubborn to remove by tape, use the cleaning patch. Coat the cleaning patch with Isopropyl Alcohol. Touch the cleaning patch to the head tip and gently turn the head(rotating cylinder) right and left.
(Do not move the cleaning patch vertically. Make sure that only the buckskin on the cleaning patch comes into contact with the head. Otherwise, the head may be damaged.)
Thoroughly dry the head. Then run the test tape. If Isopropyl Alcohol remains on the video head, the tape may be damaged when it comes into contact with the head surface.
(2) Clean the tape transport system and drive system, etc, by wiping with a cleaning patch wetted with Isporopyl Alcohol.

NOTES:

a. It is the tape transport system which comes into contact with the running tape. The drive system consists of those parts which moves the tape.
b. Make sure that during cleaning you do not touch the tape transport system with the tip of a screw driver and no that force is that would cause deforming or damage applied to the system.

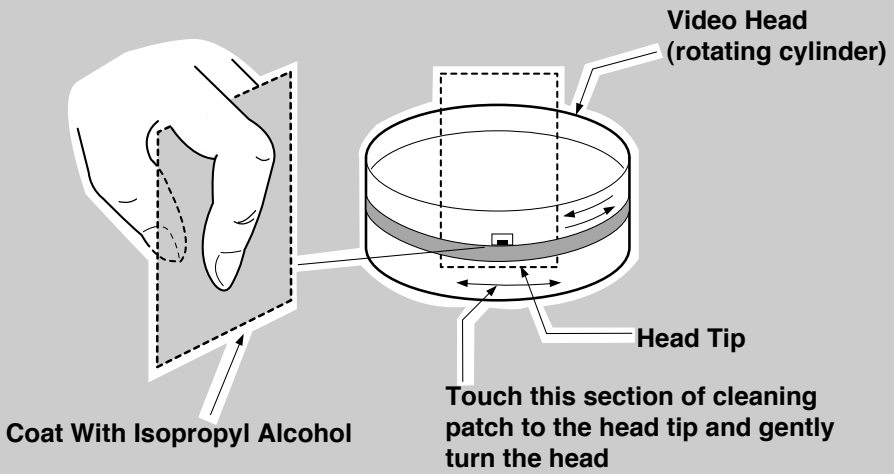

Video Head
(rotating cylinder)
Head Tip
Touch this section of cleaning patch to the head tip and gently turn the head
Coat With Isopropyl Alcohol

Fig. C-10-1

5-2) Greasing

(1) Greasing guidelines
Apply grease, with a cleaning patch. Do not use excess grease. It may come into contact with the tape transport or drive system. Wipe any excess and clean with cleaning patch wetted in Isopropyl Alcohol.

(2) Periodic greasing
Grease specified locations every 5,000 hours.

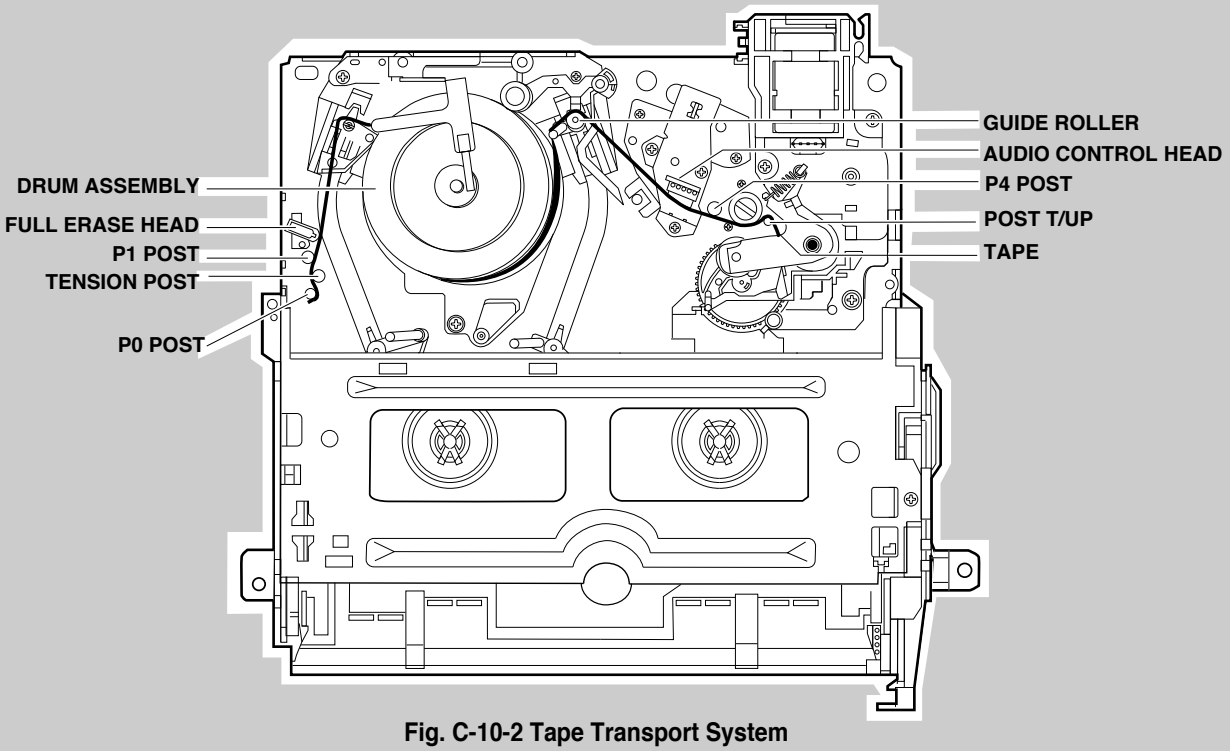


Fig. C-10-2 Tape Transport System

MECHANISM ADJUSTMENT

Phenomenon	Inspection	Replace-ment
Color beats	Dirt on full-erase head	¡Û → ¨ç
Poor S/N no color	Dirt on video head	¡Û → ¨è
Vertical jitter	Dirt on video head Dirt on tape transport system	¡Û → ¨é
Low volume Sound distorted	Dirt on audio/control head	¡Û → ¨ê
Tape does not run. Tape is slack.	Dirt on pinch roller	¡Û → ¨ë

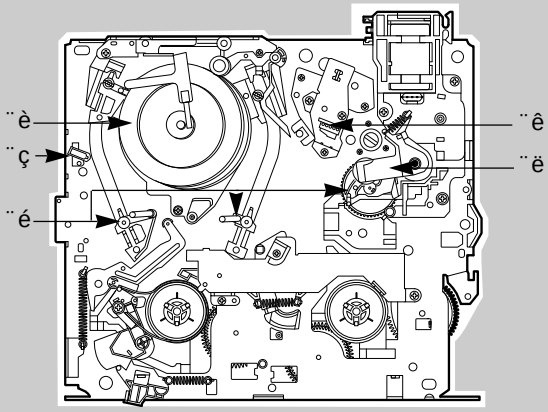


Fig. C-10-3 Top VIEW

Phenomenon	Inspection	Replace-ment
* No fast forward or rewind, or rotation is slow * Tape does not run * Slack tape	Dirt on reel belt	¡Û → ¨ì
In Review and Unloading (off mode), the Tape is rolled up loosely.	Clutch Ass'y S27 Torque reduced Cleaning Drum and transport system	¡Û → ¨í

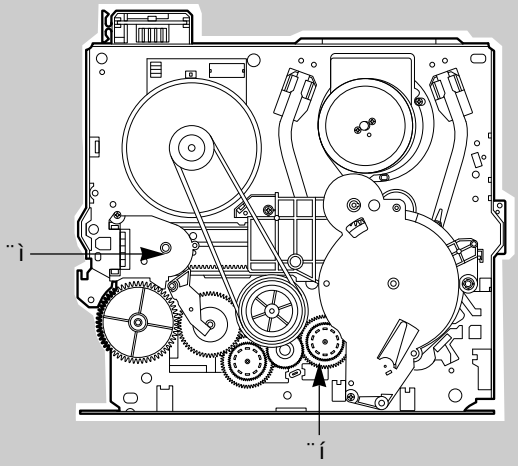


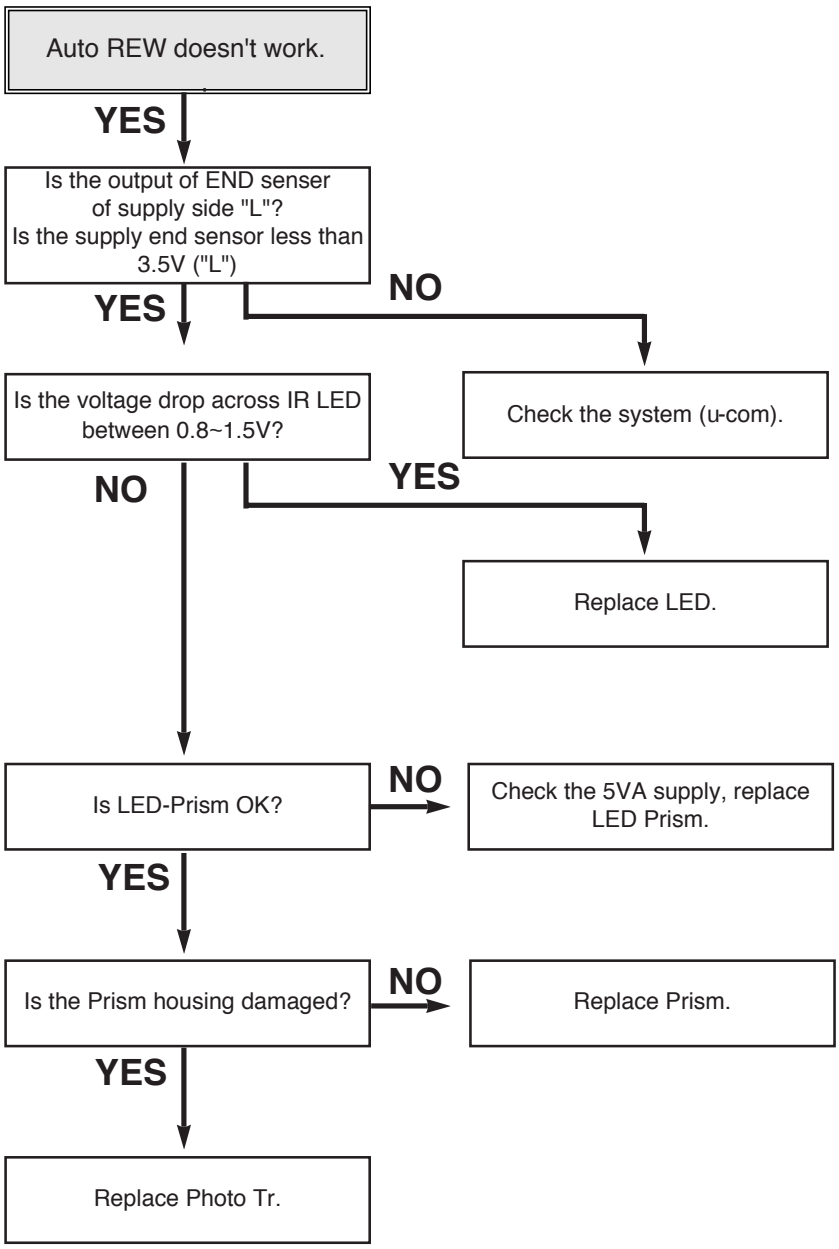
Fig. C-10-4 BOTTOM VIEW

Note

If locations marked with ¡Ûdo not operate normally after cleaning, check for wear and replace.
See the EXPLODED VIEWS at the end of this manual as well as the above illustrations for the sections to be lubricated and greased.

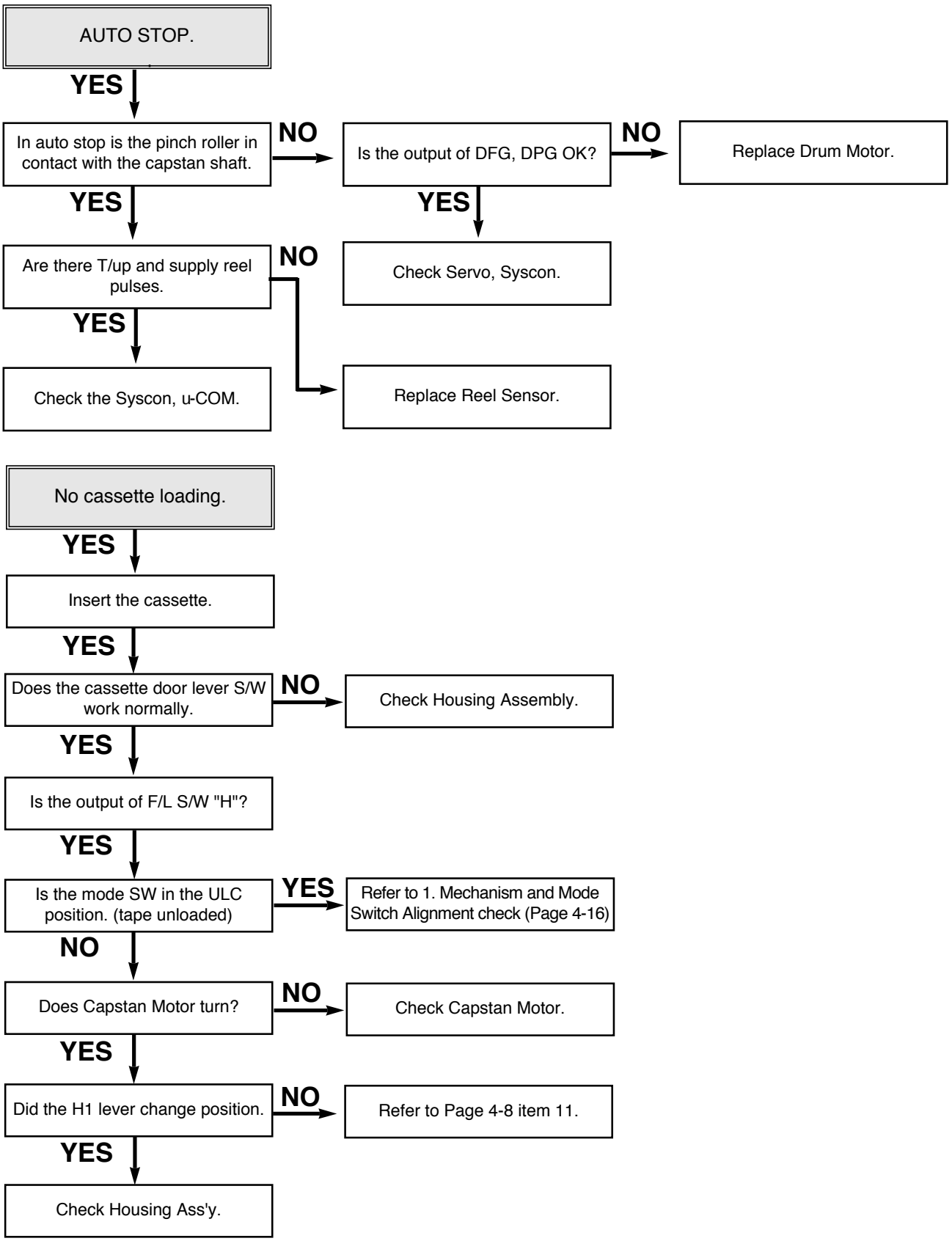
1.Deck Mechanism

A.

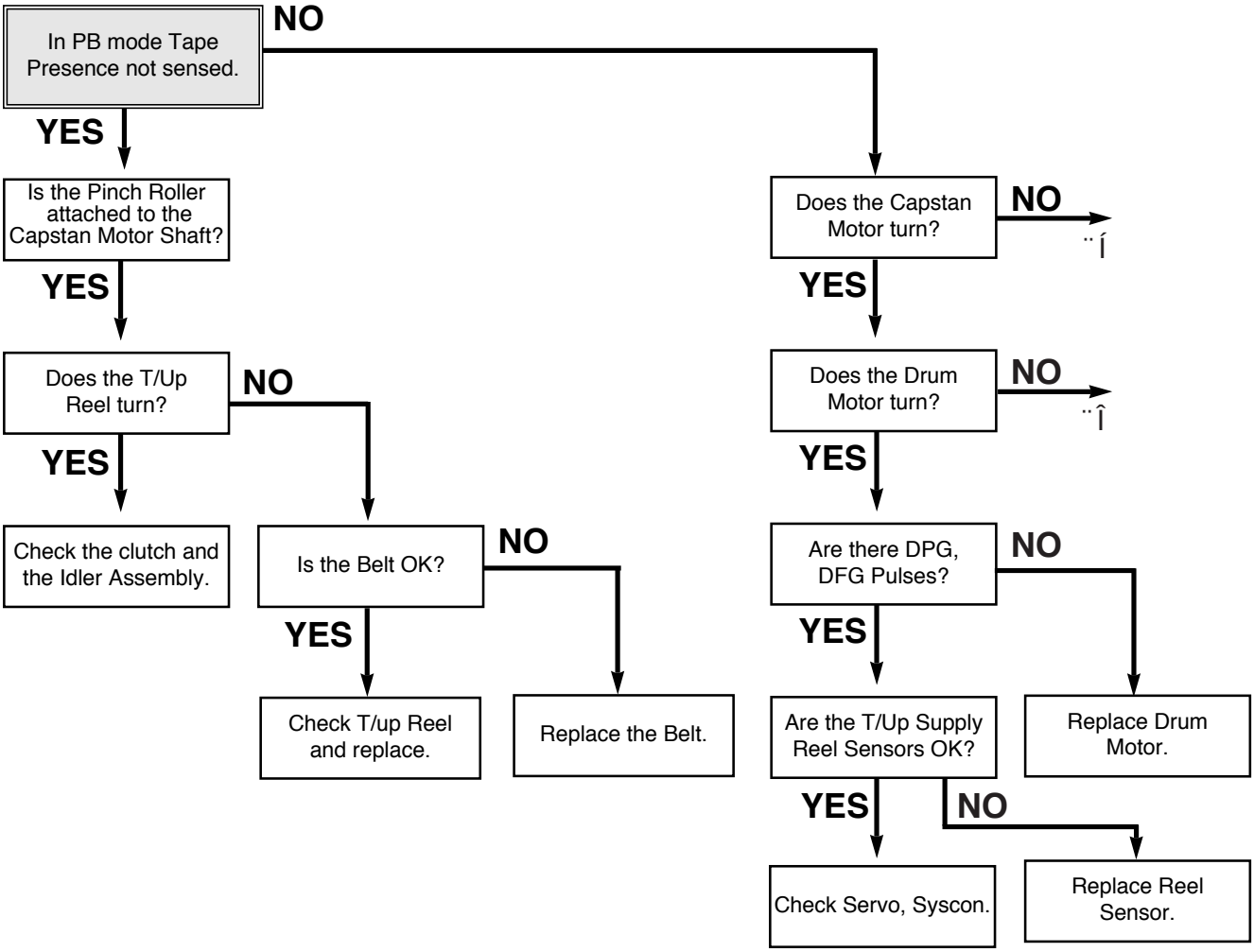


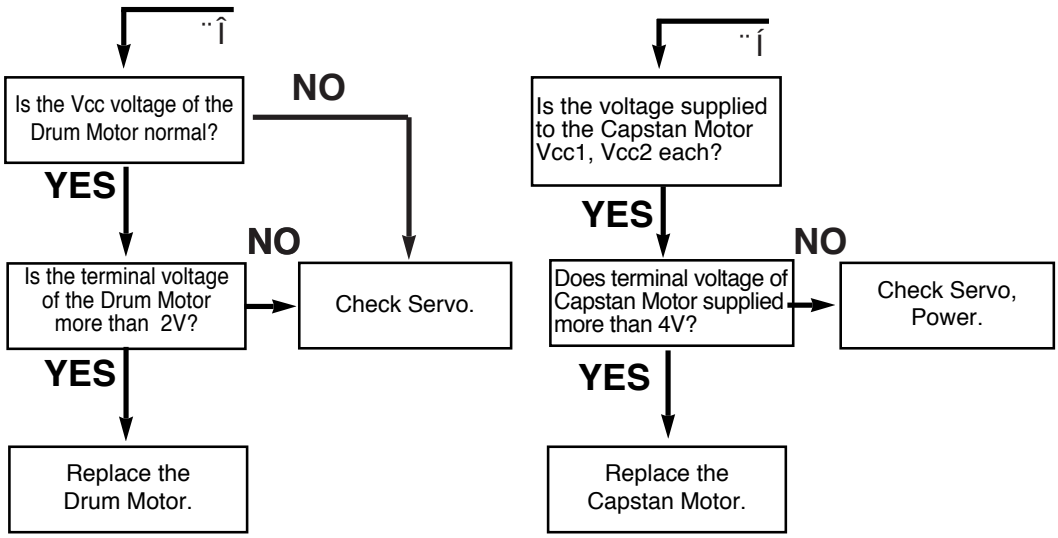
NOTES:

1) Auto REW takes place when the supply end sensor is "H" high.
2) "H"=voltage greater than 3.5V, "L"=voltage between 0.7~1.0V.

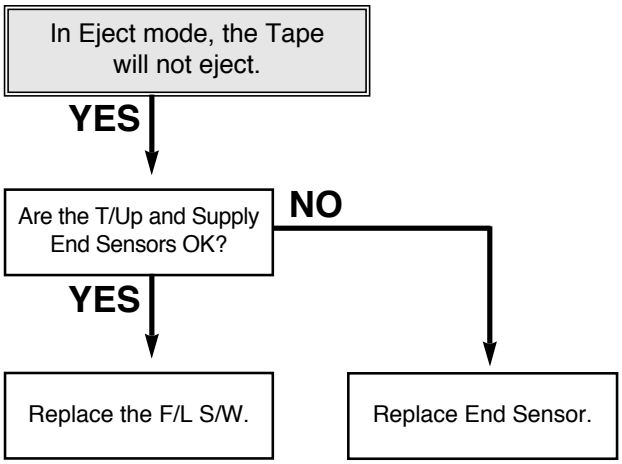

AUTO STOP.
YES
In auto stop is the pinch roller in contact with the capstan shaft.
NO
Is the output of DFG, DPG OK?
NO
Replace Drum Motor.
YES
YES
Are there T/up and supply reel pulses.
NO
Check Servo, Syscon.
YES
Check the Syscon, u-COM.
Replace Reel Sensor.
No cassette loading.
YES
Insert the cassette.
YES
Does the cassette door lever S/W work normally.
NO
Check Housing Assembly.
YES
Is the output of F/L S/W "H"?
YES
Is the mode SW in the ULC position. (tape unloaded)
YES
Refer to 1. Mechanism and Mode Switch Alignment check (Page 4-16)
NO
Does Capstan Motor turn?
NO
Check Capstan Motor.
YES
Did the H1 lever change position.
NO
Refer to Page 4-8 item 11.
YES
Check Housing Ass'y.

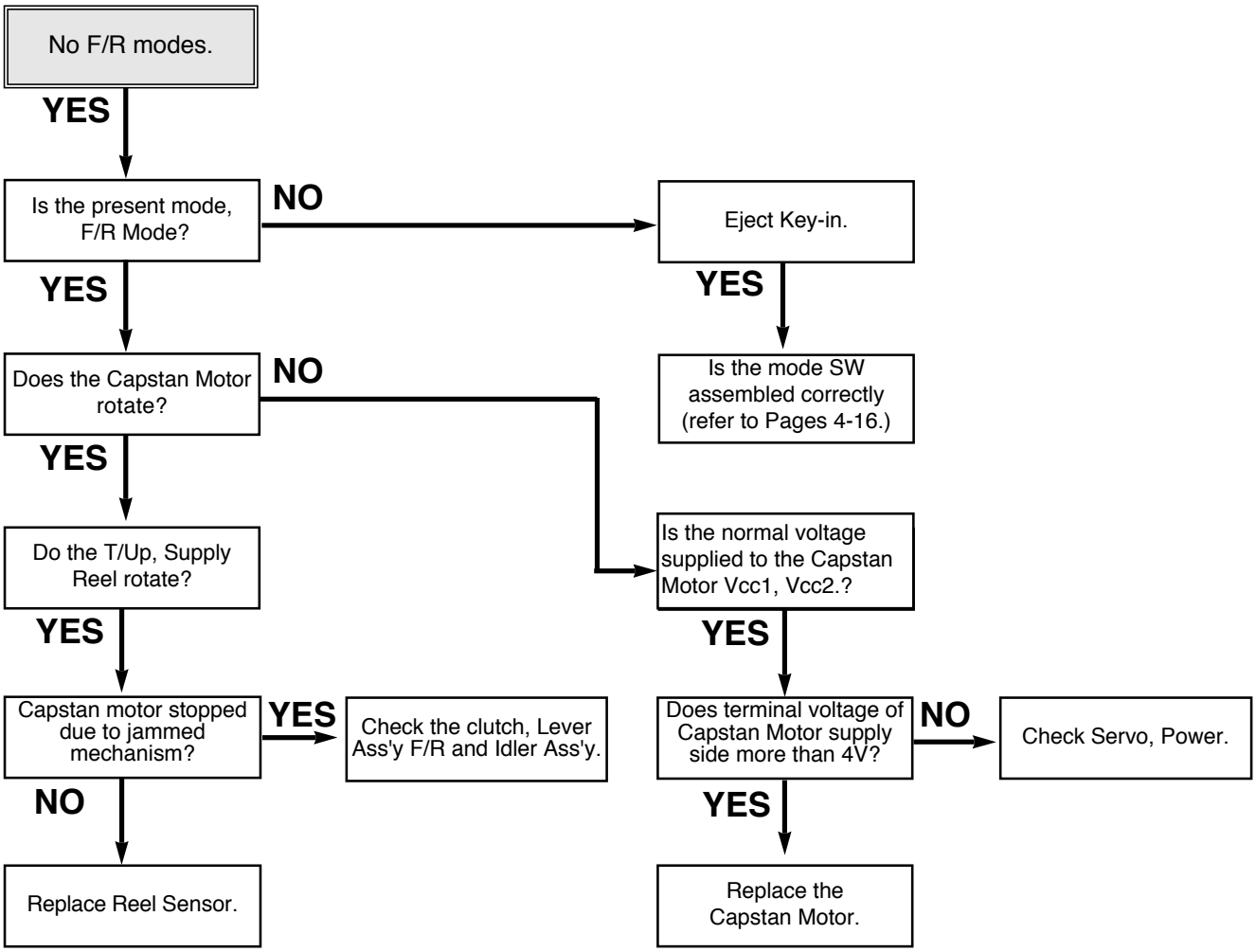
D.


In PB mode Tape Presence not sensed.
NO
YES
Is the Pinch Roller attached to the Capstan Motor Shaft?
YES
Does the T/Up Reel turn?
NO
YES
Check the clutch and the Idler Assembly.
Is the Belt OK?
NO
YES
Check T/up Reel and replace.
Replace the Belt.
Does the Capstan Motor turn?
NO
YES
Does the Drum Motor turn?
NO
YES
Are there DPG, DFG Pulses?
NO
YES
Are the T/Up Supply Reel Sensors OK?
Replace Drum Motor.
YES
NO
Check Servo, Syscon.
Replace Reel Sensor.


Is the Vcc voltage of the Drum Motor normal?
NO
YES
Is the terminal voltage of the Drum Motor more than 2V?
NO
Check Servo.
YES
Replace the Drum Motor.
Is the voltage supplied to the Capstan Motor Vcc1, Vcc2 each?
YES
Does terminal voltage of Capstan Motor supplied more than 4V?
NO
Check Servo, Power.
YES
Replace the Capstan Motor.

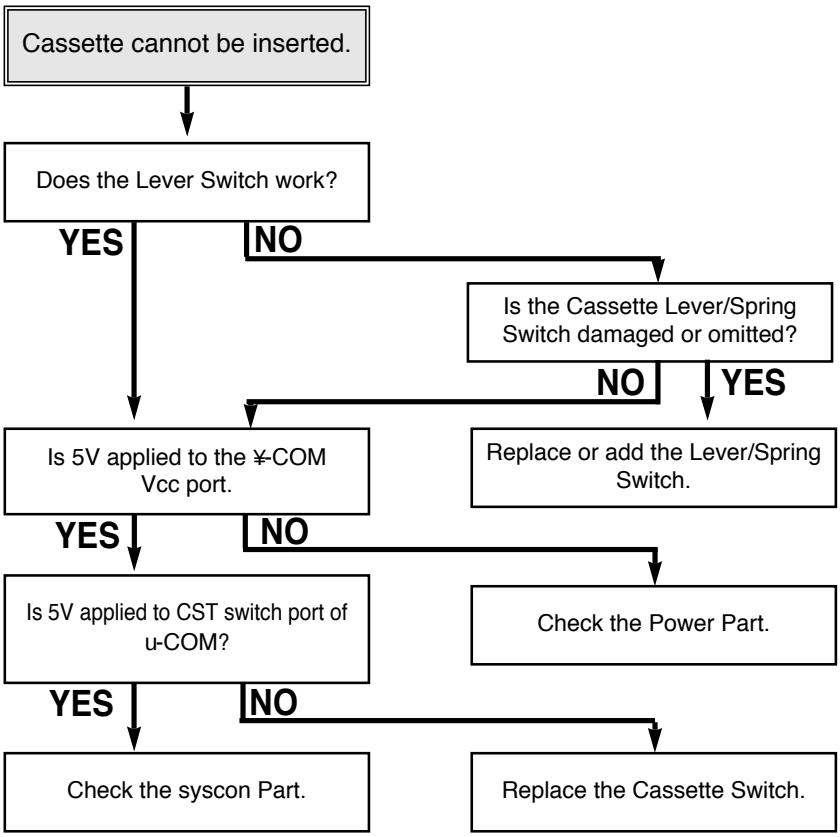
E.


In Eject mode, the Tape will not eject.
YES
Are the T/Up and Supply End Sensors OK?
NO
YES
Replace the F/L S/W.
Replace End Sensor.

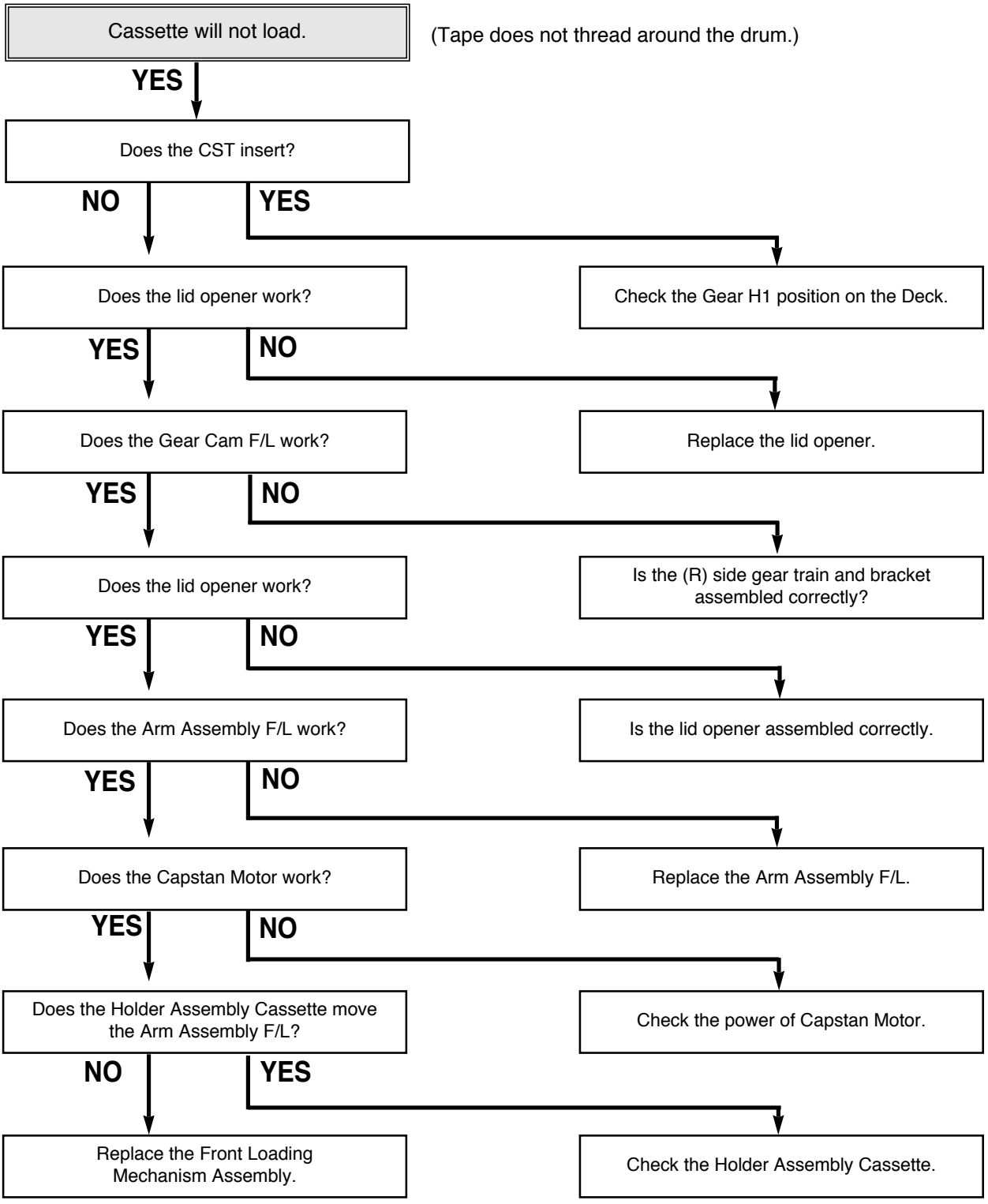

No F/R modes.
YES
Is the present mode, F/R Mode?
NO
Eject Key-in.
YES
YES
Is the mode SW assembled correctly (refer to Pages 4-16.)
Does the Capstan Motor rotate?
NO
YES
Do the T/Up, Supply Reel rotate?
Is the normal voltage supplied to the Capstan Motor Vcc1, Vcc2.?
YES
YES
Capstan motor stopped due to jammed mechanism?
YES
Check the clutch, Lever Ass'y F/R and Idler Ass'y.
Does terminal voltage of Capstan Motor supply side more than 4V?
NO
Check Servo, Power.
NO
YES
Replace Reel Sensor.
Replace the Capstan Motor.

2. Front Loading Mechanism

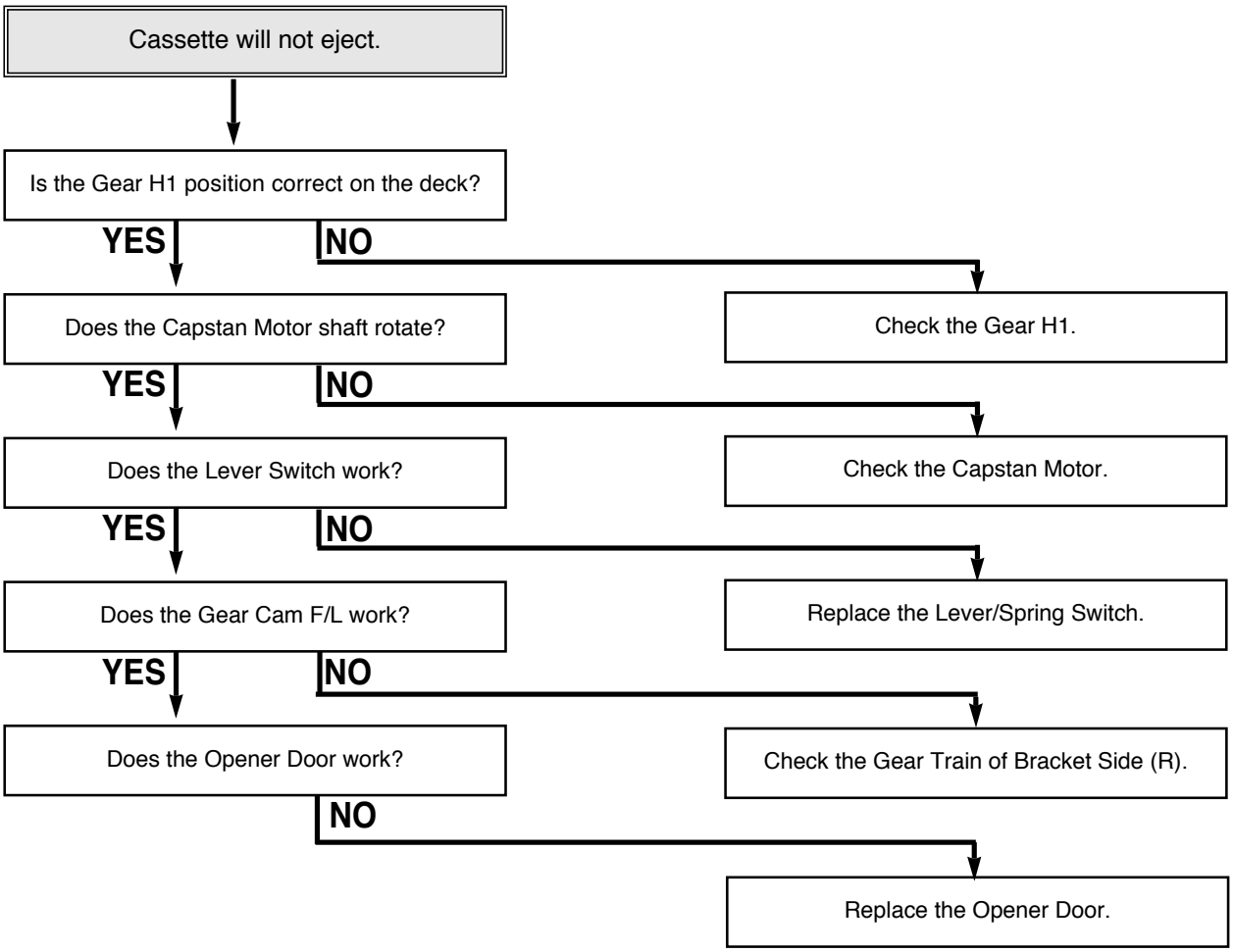
A.



B.


Cassette will not load.
(Tape does not thread around the drum.)
YES
Does the CST insert?
NO
YES
Does the lid opener work?
Check the Gear H1 position on the Deck.
YES
NO
Does the Gear Cam F/L work?
Replace the lid opener.
YES
NO
Does the lid opener work?
Is the (R) side gear train and bracket assembled correctly?
YES
NO
Does the Arm Assembly F/L work?
Is the lid opener assembled correctly.
YES
NO
Does the Capstan Motor work?
Replace the Arm Assembly F/L.
YES
NO
Does the Holder Assembly Cassette move the Arm Assembly F/L?
Check the power of Capstan Motor.
NO
YES
Replace the Front Loading Mechanism Assembly.
Check the Holder Assembly Cassette.

C.

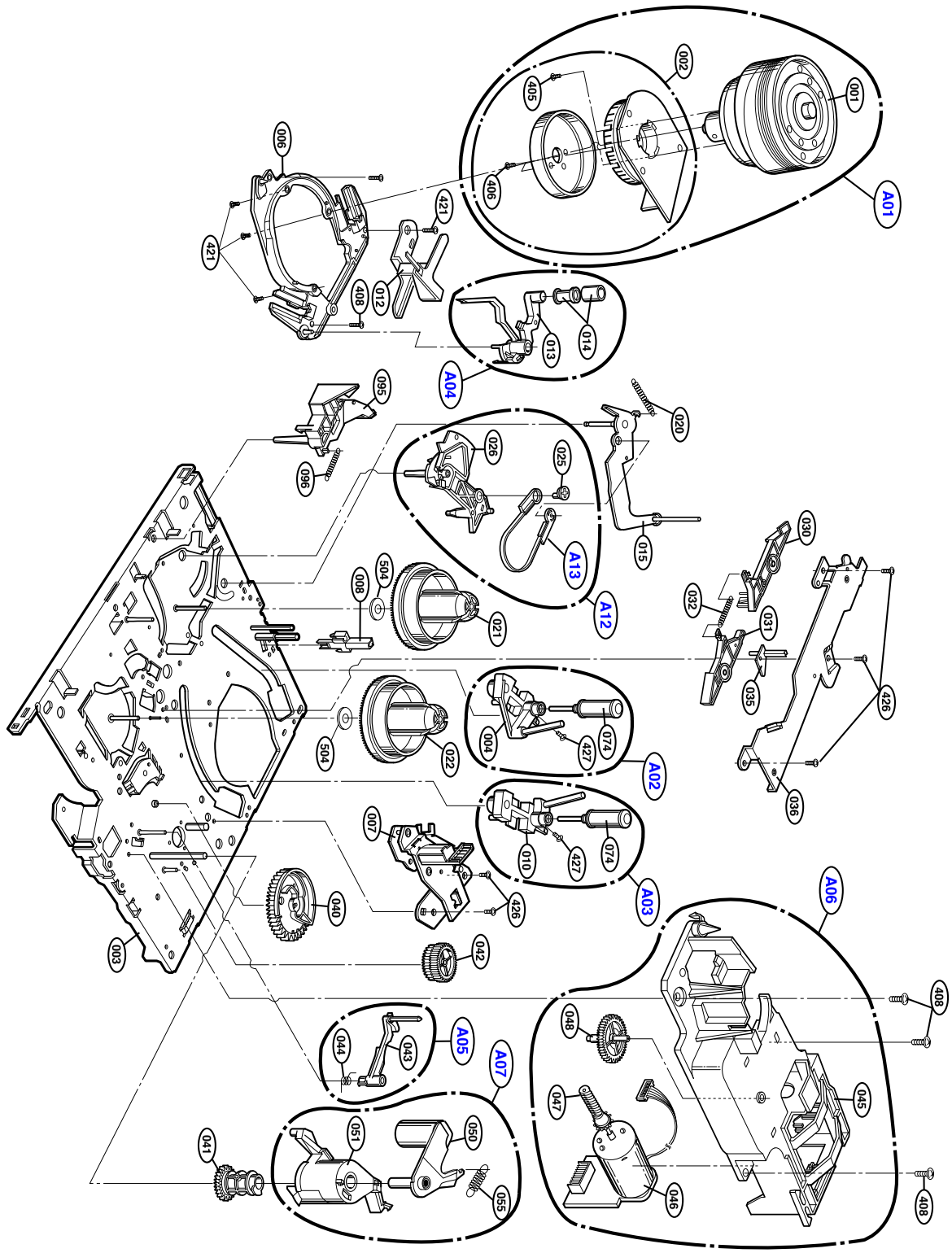

Cassette will not eject.
Is the Gear H1 position correct on the deck?
YES
NO
Check the Gear H1.
Does the Capstan Motor shaft rotate?
YES
NO
Check the Capstan Motor.
Does the Lever Switch work?
YES
NO
Replace the Lever/Spring Switch.
Does the Gear Cam F/L work?
YES
NO
Check the Gear Train of Bracket Side (R).
Does the Opener Door work?
NO
Replace the Opener Door.

EXPLODED VIEW

1. Moving Mechanism Section (1)

(Top View)

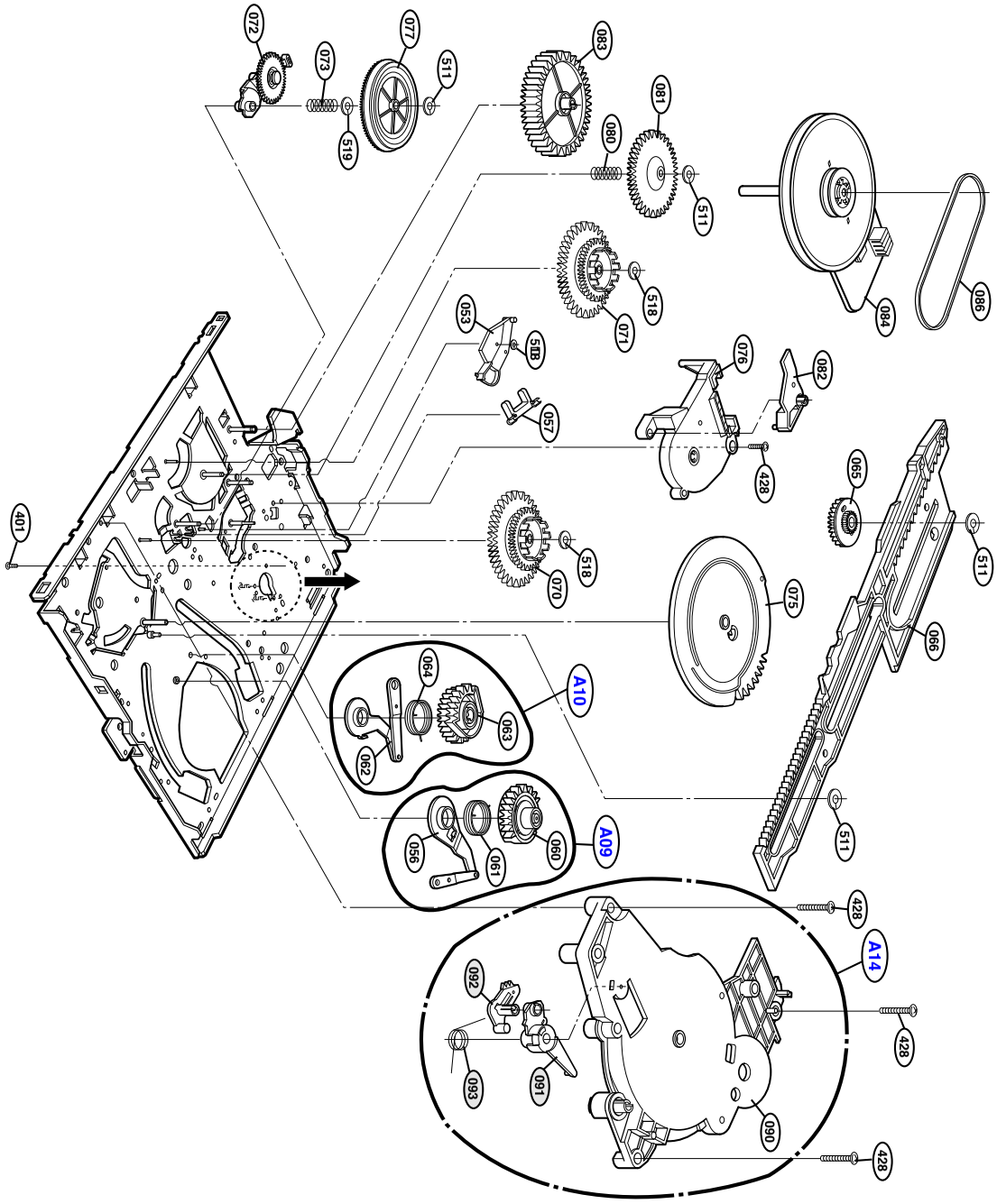
NOTE) ⬭ marks the optional parts only in VCR (Video Cassette Recorder) Models.



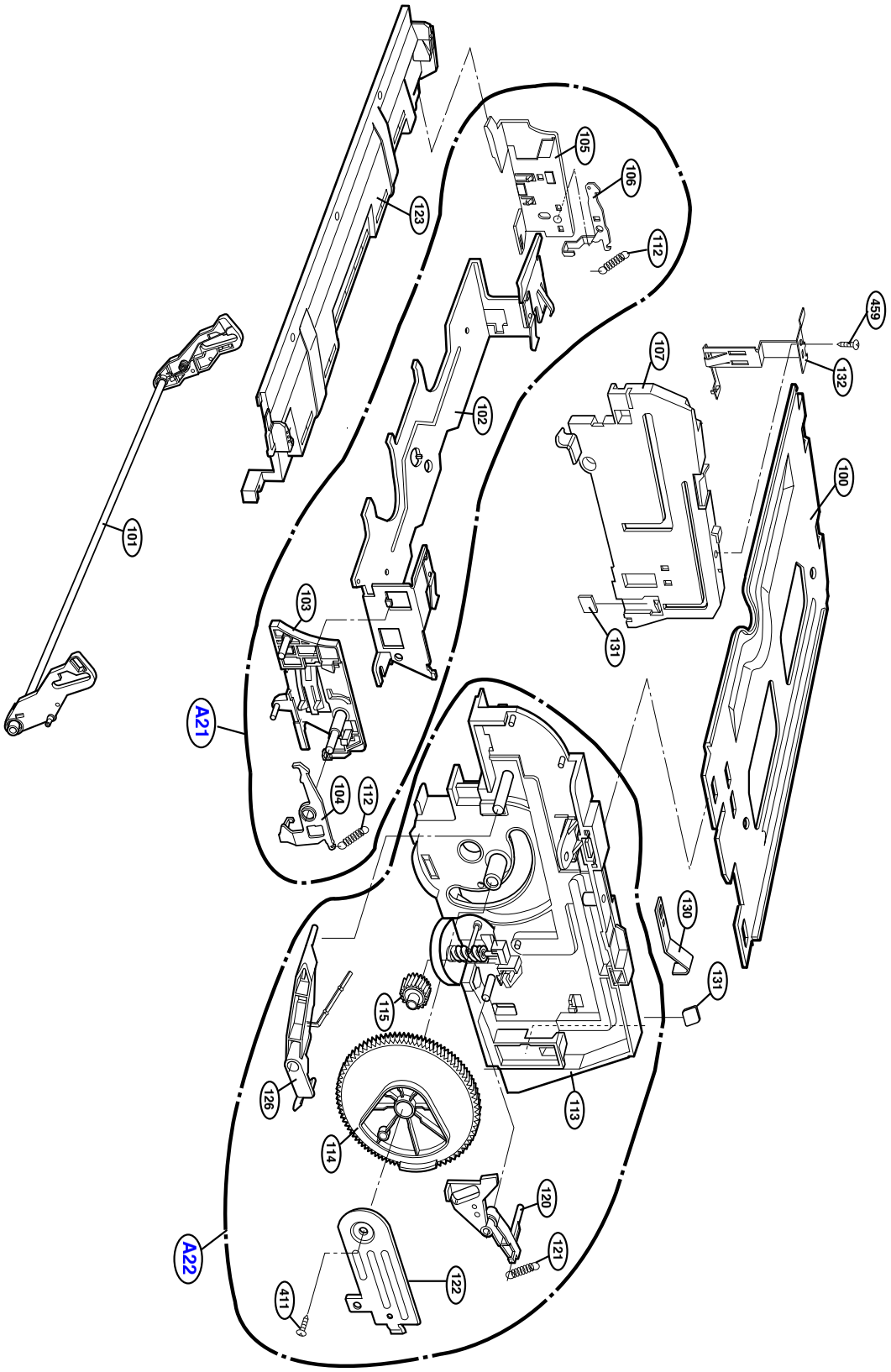
2. Moving Mechanism Section (2)

(Bottom View)

NOTE) 000 is the additional parts of the VCR (Video Cassette Recoder) Models.



3. Front Loading Mechanism Section



REPLACEMENT PARTS LIST

1. Mechanical Section

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
				ASSEMBLY PARTS SECTION		
		A00	412-172B	DECK	ASSY D-27 N (4HD MONO VCR)	
		A01	6723R-0025A	DRUM	ASSY (D-27 N4S)	
		A02	225-361A	BASE	ASSY P2	
		A03	225-364A	BASE	ASSY P3	
		A04	386-394A	ARM	ASSY CLEANER	
		A05	386-405A	ARM	ASSY T/UP	
		A06	4811R-0004A	BRACKET	ASSY L/D MOTOR	
		A07	340-070A	HOLDER	ASSY PINCH	
		A08	333-331A	LEVER	ASSY F/R	
		A09	435-435A	GEAR	ASSY P2	
		A10	435-437A	GEAR	ASSY P3	
		A12	333-329A	LEVER	ASSY TENSION	
		A13	328-075A	BAND	ASSY TENSION	NSP
		A20	219-023A	HOUSING	ASSY-D27	
		A21	340-010A	HOLDER	ASSY CST	
		A22	321-672A	BRACKET	ASSY SIDE(R)	
				PARTS SECTION		
		001	6723R-0024A	DRUM	SUB ASSY (4HD)	
		002	414-209B	MOTOR	ASSY DRUM GVD-027A ALPS	
		003	311-011A	CHASSIS ASSY	D27	NSP
		004	225-362A	BASE	SUB ASSY P2	NSP
		006	225-368A	BASE	DRUM	
		007	225-371A	BASE	ASSY A/C	
		008	523-833A	HEAD	FE HVFHU0010AK ALPS	
		010	225-365A	BASE	SUB ASSY P3	NSP
		012	225-399A	BASE	ASSY BRUSH	
		013	386-395A	ARM	CLEANER	NSP
		014	324-835B	HOLDER	ASSY CLEANER	NSP
		015	386-392A	ARM	ASSY TENSION	
		020	442-640A	SPRING	TENSION	
		021	456-070A	REEL	S27	
		022	456-071A	REEL	T27	
		025	340-008A	HOLDER	BAND(C)	NSP
		026	333-330A	LEVER	TENSION	NSP
		030	338-112A	BRAKE	ASSY SM	
		031	338-114A	BRAKE	ASSY TM	
		032	442-655A	SPRING	MB	
		033	338-116A	BRAKE	ASSY TS	
		034	442-654A	SPRING	TSB	
		035	316-019A	BODY	PRISM LED	
		036	257-071A	PLATE	UP	
		040	435-441A	GEAR	PINCH CAM	
		041	435-440A	GEAR	PINCH	
		042	435-439A	GEAR	CNT	
		043	386-404A	ARM	SUB ASSY T/UP	
		044	442-650A	SPRING	T/UP	NSP
		045	321-669A	BRACKET	L/D MOTOR	

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		046	414-199B	MOTOR	ASSY L/D	
		047	4422R-0001A	WORM	L/D MOTOR	
		048	437-020A	WORM	WHEEL	
		050	386-401A	ARM	ASSY PINCH	
		051	340-073A	HOLDER	SUB ASSY PINCH	
		052	225-374A	BASE	TENSION	
		053	333-332A	LEVER	F/R	NSP
		054	442-645A	SPRING	F/R	NSP
		055	442-649A	SPRING	PINCH	NSP
		056	333-334A	LEVER	ASSY P2	NSP
		057	386-398A	ARM	F/R	
		060	435-436A	GEAR	P2	NSP
		061	442-647A	SPRING	P2	NSP
		062	333-336A	LEVER	ASSY P3	NSP
		063	435-438A	GEAR	P3	NSP
		064	442-648A	SPRING	P3	NSP
		065	435-442A	GEAR	P/S	
		066	257-070A	PLATE	SLIDER	
		070	337-007B	CLUTCH	ASSY S27	
		071	337-008A	CLUTCH	ASSY T27	
		072	386-396A	ARM	ASSY IDLER	
		073	442-644A	SPRING	UP/D	
		074	434-173A	ROLLER	ASSY GUIDE	
		074	434-173C	ROLLER	ASSY GUIDE	
		075	435-433A	GEAR	CAM L/D	
		076	556-252B	SWITCH	MODE S/W(D27), HMU0840-01, HOSI	
	OR	077	435-432A	GEAR	PULLEY	
		080	442-656A	SPRING	H1	
		081	435-443A	GEAR	H1	
		082	333-339A	LEVER	H1	
		083	435-444A	GEAR	H-2	
		084	414-201A	MOTOR	GVC-027A CAPSTAN D-27 ALPS	
		085	321-696A	BRACKET	CAPSATN, D27	
		086	452-062A	BELT	CAPSTAN	
		090	321-670A	BRACKET	CAM	
		091	333-333A	LEVER	JOG	
		092	435-434A	GEAR	JOG	
		093	442-646A	SPRING	JOG	
		094	338-110A	BRAKE	ASSY CAP	
		095	333-338A	LEVER	TAB	NSP
		096	442-652A	SPRING	TAB	
		100	257-072A	PLATE	TOP	
		101	386-407A	ARM	ASSY F/L	
		102	340-011A	HOLDER	SUB ASSY CST	NSP
		103	321-671A	BRACKET	HOLDER(R)	NSP
		104	333-341A	LEVER	STOPPER(R)	NSP
		105	465-039A	OPENER	LID	NSP
		106	386-410A	ARM	RELEASE	NSP
		110	442-660A	SPRING	RELEASE	
		111	442-659A	SPRING	STOPPER	
		112	477-058A	RUBBER	GRIP	NSP
		113	321-673A	BRACKET	SUB ASSY(R)	NSP
		114	435-445A	GEAR	CAM F/L	NSP
		115	435-446A	GEAR	CONNECT	NSP
		116	435-447A	GEAR	WORM	NSP

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		120	333-342A	LEVER	SWITCH	NSP
		121	442-661A	SPRING	SWITCH	NSP
		122	257-074A	PLATE	COVER	NSP
		123	384-143A	GUIDE	CST	
		123	384-151A	GUIDE	CST27	
		126	465-040A	OPENER	DOOR	NSP
	OR	130	257-075A	PLATE	GROUND	NSP
		131	340-062A	HOLDER	ASSY PRISM	
				SCREW		
		401	1MPK0261418	PAN HEAD MACHINE SCREW +, -	D2.6 L4.0 MSWR3/FZY	
		405	1MDC0262818	PAN HEAD MACHINE SCREW P/WASH+	D2.6 L12 MSWR3/FZY	
		406	1MEC0302018	PAN HEAD MACHINE SCREW S/W+	D3.0 L6.0 MSWR3/FZY	
		408	1MBC0302418	BINDING HEAD MACHINE SCREW +	D3.0 L8.0 MSWR3/FZY	
		411	353-046B	SCREW	SPECIAL (3X8 FZMY)	NSP
		421	1MPC0302618	PAN HEAD MACHINE SCREW +!	D3.0 L10.0, MSWR3/FZY	
		426	1MPC0302018	PAN HEAD MACHINE SCREW +!	D3.0 L6.0 MSWR3/FZY	
		427	353-054B	SCREW	MINIATURE	
		428	353-221A	SCREW	M3-L15	
				NUT, WASHER		
		500	354-080F	WASHER	STOPPER	
		504	354-001B	WASHER	P.S D3.1XD6X0.5T	
		511	354-080C	WASHER	STOPPER D2.6XD5X0.5T	
		518	354-128A	WASHER	STOPPER D1.7XD4.5X0.5T	
		519	354-128B	WASHER	STOPPER D2.5XD9X0.5T	

REPLACEMENT PARTS LIST

1. Mechanical Section

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
				ASSEMBLY PARTS SECTION		
		A00	412-172B	DECK	ASSY D-27 N (4HD MONO VCR)	
		A01	6723R-0025A	DRUM	ASSY (D-27 N4S)	
		A02	225-361A	BASE	ASSY P2	
		A03	225-364A	BASE	ASSY P3	
		A04	386-394A	ARM	ASSY CLEANER	
		A05	386-405A	ARM	ASSY T/UP	
		A06	4811R-0004A	BRACKET	ASSY L/D MOTOR	
		A07	340-070A	HOLDER	ASSY PINCH	
		A08	333-331A	LEVER	ASSY F/R	
		A09	435-435A	GEAR	ASSY P2	
		A10	435-437A	GEAR	ASSY P3	
		A12	333-329A	LEVER	ASSY TENSION	
		A13	328-075A	BAND	ASSY TENSION	NSP
		A20	219-023A	HOUSING	ASSY-D27	
		A21	340-010A	HOLDER	ASSY CST	
		A22	321-672A	BRACKET	ASSY SIDE(R)	
				PARTS SECTION		
		001	6723R-0024A	DRUM	SUB ASSY (4HD)	
		002	414-209B	MOTOR	ASSY DRUM GVD-027A ALPS	
		003	311-011A	CHASSIS ASSY	D27	NSP
		004	225-362A	BASE	SUB ASSY P2	NSP
		006	225-368A	BASE	DRUM	
		007	225-371A	BASE	ASSY A/C	
		008	523-833A	HEAD	FE HVFHU0010AK ALPS	
		010	225-365A	BASE	SUB ASSY P3	NSP
		012	225-399A	BASE	ASSY BRUSH	
		013	386-395A	ARM	CLEANER	NSP
		014	324-835B	HOLDER	ASSY CLEANER	NSP
		015	386-392A	ARM	ASSY TENSION	
		020	442-640A	SPRING	TENSION	
		021	456-070A	REEL	S27	
		022	456-071A	REEL	T27	
		025	340-008A	HOLDER	BAND(C)	NSP
		026	333-330A	LEVER	TENSION	NSP
		030	338-112A	BRAKE	ASSY SM	
		031	338-114A	BRAKE	ASSY TM	
		032	442-655A	SPRING	MB	
		033	338-116A	BRAKE	ASSY TS	
		034	442-654A	SPRING	TSB	
		035	316-019A	BODY	PRISM LED	
		036	257-071A	PLATE	UP	
		040	435-441A	GEAR	PINCH CAM	
		041	435-440A	GEAR	PINCH	
		042	435-439A	GEAR	CNT	
		043	386-404A	ARM	SUB ASSY T/UP	
		044	442-650A	SPRING	T/UP	NSP
		045	321-669A	BRACKET	L/D MOTOR	

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		050	386-401A	ARM	ASSY PINCH	
		051	340-073A	HOLDER	SUB ASSY PINCH	
		052	225-374A	BASE	TENSION	
		053	333-332A	LEVER	F/R	NSP
		054	442-645A	SPRING	F/R	NSP
		055	442-649A	SPRING	PINCH	NSP
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		057	386-398A	ARM	F/R	
		060	435-436A	GEAR	P2	NSP
		061	442-647A	SPRING	P2	NSP
		062	333-336A	LEVER	ASSY P3	NSP
		063	435-438A	GEAR	P3	NSP
		064	442-648A	SPRING	P3	NSP
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		070	337-007B	CLUTCH	ASSY S27	
		071	337-008A	CLUTCH	ASSY T27	
		072	386-396A	ARM	ASSY IDLER	
		073	442-644A	SPRING	UP/D	
		074	434-173A	ROLLER	ASSY GUIDE	
		074	434-173C	ROLLER	ASSY GUIDE	
		075	435-433A	GEAR	CAM L/D	
		076	556-252B	SWITCH	MODE S/W(D27), HMU0840-01, HOSI	
	OR	077	435-432A	GEAR	PULLEY	
		080	442-656A	SPRING	H1	
		081	435-443A	GEAR	H1	
		082	333-339A	LEVER	H1	
		083	435-444A	GEAR	H-2	
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		085	321-696A	BRACKET	CAPSATN, D27	
		086	452-062A	BELT	CAPSTAN	
		090	321-670A	BRACKET	CAM	
		091	333-333A	LEVER	JOG	
		092	435-434A	GEAR	JOG	
		093	442-646A	SPRING	JOG	
		094	338-110A	BRAKE	ASSY CAP	
		095	333-338A	LEVER	TAB	NSP
		096	442-652A	SPRING	TAB	
		100	257-072A	PLATE	TOP	
		101	386-407A	ARM	ASSY F/L	
		102	340-011A	HOLDER	SUB ASSY CST	NSP
		103	321-671A	BRACKET	HOLDER(R)	NSP
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		110	442-660A	SPRING	RELEASE	
		111	442-659A	SPRING	STOPPER	
		112	477-058A	RUBBER	GRIP	NSP
		113	321-673A	BRACKET	SUB ASSY(R)	NSP
		114	435-445A	GEAR	CAM F/L	NSP
		115	435-446A	GEAR	CONNECT	NSP
		116	435-447A	GEAR	WORM	NSP

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
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		121	442-661A	SPRING	SWITCH	NSP
		122	257-074A	PLATE	COVER	NSP
		123	384-143A	GUIDE	CST	
		123	384-151A	GUIDE	CST27	
		126	465-040A	OPENER	DOOR	NSP
	OR	130	257-075A	PLATE	GROUND	NSP
		131	340-062A	HOLDER	ASSY PRISM	
				SCREW		
		401	1MPK0261418	PAN HEAD MACHINE SCREW +, -	D2.6 L4.0 MSWR3/FZY	
		405	1MDC0262818	PAN HEAD MACHINE SCREW P/WASH+	D2.6 L12 MSWR3/FZY	
		406	1MEC0302018	PAN HEAD MACHINE SCREW S/W+	D3.0 L6.0 MSWR3/FZY	
		408	1MBC0302418	BINDING HEAD MACHINE SCREW +	D3.0 L8.0 MSWR3/FZY	
		411	353-046B	SCREW	SPECIAL (3X8 FZMY)	NSP
		421	1MPC0302618	PAN HEAD MACHINE SCREW +!	D3.0 L10.0, MSWR3/FZY	
		426	1MPC0302018	PAN HEAD MACHINE SCREW +!	D3.0 L6.0 MSWR3/FZY	
		427	353-054B	SCREW	MINIATURE	
		428	353-221A	SCREW	M3-L15	
				NUT, WASHER		
		500	354-080F	WASHER	STOPPER	
		504	354-001B	WASHER	P.S D3.1XD6X0.5T	
		511	354-080C	WASHER	STOPPER D2.6XD5X0.5T	
		518	354-128A	WASHER	STOPPER D1.7XD4.5X0.5T	
		519	354-128B	WASHER	STOPPER D2.5XD9X0.5T	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REPLACEMENT PARTS LIST

* marked components for 14" model's location numbers have 1000 lower as R2902 for 20"/21" is R1902 for 14".

LOCA. NO	PART NO	DESCRIPTION
	IC	
IC01	0IKE703300B	IC,KIA7033P 3P 3.3V RESET(TAPING)
IC01F	0IPH981200A	IC,TDA9812T VIF/SIF SOP28 TP . .
IC01T	0ITI702062A	IC,CX70206NW 28DIP TXT DECORDER
IC01Y	0ISA722200A	IC,LA7222 (1280 AUDIO)
IC02	0IKE358000A	IC,KIA358P(OP AMP)
IC02T	0ITI724160A	IC,CF72416N 20D TXT D/SLICER(VPS)
IC02Y	0ISA722200A	IC,LA7222 (1280 AUDIO)
IC03	0ISG241600A	IC,ST24C16 8D EEPROM(16K)
IC03Y	0ISA722200A	IC,LA7222 (1280 AUDIO)
IC04	0IMI350410R	IC,M35041-091FP 20SOP TP OSD
IC04Y	0ISA722200A	IC,LA7222 (1280 AUDIO)
IC05	0IGS744500B	IC,GL7445 10SIP BI-MOTOR DRIVER
IC06	0IKE703300B	IC,KIA7033P 3P 3.3V RESET(TAPING)
IC10	0IGS876806A	IC,LG8768-06A(GMS3977S-A98F) 100Q
"	0IGS885802A	IC,LG8858-02A(GMS3977S-A101F)*1T,W/O TXT
* IC2901	0IPH610700A	IC,TDA6107Q SIP9 BK VIDEO OUT AMP
IC301	0ISA743700A	IC,LA7437 (Y/C 1CHIP,NOT ADJ)
IC302	0ISA899700A	IC,LC89970 (1H CCD) OC3600
IC303	0ISA741100A	IC,LA7411 22SD 2HD AMP(VCR)
IC401	0IRH779700A	IC,BA7797 N/AUDIO
IC501	0IPH837410A	IC,TDA8374 VCD W/SECAM-L 1-CHIP
IC531	0IPH466500B	IC,TDA4665-V4 16D 1H D/L(TAIWAN)
IC533	0IMA586000A	IC,AN5860 14D ANALOG RGB S/W
IC601	0ISG200600A	IC,TDA2006,SOUND
IC701	0IPH835150A	IC,TDA8351/N5 9P,SIP BK V/OUT(W/O
⚠ IC801	0ISK670700B	IC,STR/S6707(LF.953) 9P (R5,R6)
⚠ IC802	0ISH123200B	IC,PC123 FY2PHOTO COUPLER
⚠ IC803	0ISH123200B	IC,PC123 FY2PHOTO COUPLER
IC851	0ISK115000A	IC,SE115N(LF12) 3P 115V ERROR AMP
IC852	0IKE780600B	IC,KIA7806PI TO-220IS 6V,1A
IC853	0IKE780800A	IC,KIA7808PI 3P(TO-220IS) 1A,8V
IC855	0IKE781200C	IC,KIA7812PI 3P(TO-220IS) 12V,1A
IC856	0ISH122100A	IC,PQ12RF21 4P(TO-220) 12V S/W RE
IC857	0IKE780600B	IC,KIA7806PI TO-220IS 6V,1A
	DIODE	
D01	0DD414809ED	DIODE,DS4148
D01T	0DD414809ED	DIODE,DS4148
D02	0DD414809ED	DIODE,DS4148
D02T	0DD414809ED	DIODE,DS4148
D03	0DD414809ED	DIODE,DS4148
D03T	0DD414809ED	DIODE,DS4148
D04	0DD414809ED	DIODE,DS4148
D05	0DD414809ED	DIODE,DS4148
D05F	0DD414809ED	DIODE,DS4148
D11	0DD414809ED	DIODE,DS4148
D14	0DD414809ED	DIODE,DS4148
D15	0DD414809ED	DIODE,DS4148
D16	0DD414809ED	DIODE,DS4148
D20	0DD414809ED	DIODE,DS4148
D204	0DD414809ED	DIODE,DS4148

LOCA. NO	PART NO	DESCRIPTION
D207	0DD414809ED	DIODE,DS4148
D21	0DD414809ED	DIODE,DS4148
* D2901	0DD400309AD	DIODE,IN4003A RECT
D303	0DD414809ED	DIODE,DS4148
D304	0DD414809ED	DIODE,DS4148
D305	0DD414809ED	DIODE,DS4148
D308	0DD414809ED	DIODE,DS4148
D309	0DD414809ED	DIODE,DS4148
D315	0DD414809ED	DIODE,DS4148
D316	0DD414809ED	DIODE,DS4148
D320	0DD414809ED	DIODE,DS4148
D401	0DD414809ED	DIODE,DS4148
D402	0DD414809ED	DIODE,DS4148
D601	0DD414809ED	DIODE,DS4148
D701	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D702	0DD150009CA	DIODE,RGP15J
D703	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D781	0DD150009CA	DIODE,RGP15J
⚠ D801	0DD110009DB	DIODE,RM11CV 1.2A/1000V 100A
⚠ D802	0DD110009DB	DIODE,RM11CV 1.2A/1000V 100A
⚠ D803	0DD110009DB	DIODE,RM11CV 1.2A/1000V 100A
⚠ D804	0DD110009DB	DIODE,RM11CV 1.2A/1000V 100A
D805	0DD150009CE	DIODE,GP15J (1.5A/600V)
D806	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D807	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D808	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D809	0DD100009AL	DIODE,EH-1ZV
D850	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D851	0DD560009AA	DIODE,BYT56M TEMIC TP TEMIC
D852	0DD100009AE	DIODE,RU-1A V
D853	0DD420000BB	DIODE,D4L20U
D854	0DD420000BB	DIODE,D4L20U
D855	0DD360009AA	DIODE,BYW36 TP (2A/600V) TELEFUNKEN
D858	0DD247109AA	DIODE,1S2471
D859	0DD360009AA	DIODE,BYW36 TP (2A/600V) TELEFUNKEN
D860	0DD060009AC	DIODE,TVR06J 0.6A/600V 250NS
D861	0DD414809ED	DIODE,DS4148
D863	0DD340009EA	DIODE,BYW34 TP (2A/400V) TELEFUNKEN
LED01	162-002A	DIODE,LED,A'SSY(DL-G11RA)
LED05	0DL380009AB	LED GL380JTP IR LED D-27 TP
LED234	4930V00039A	HOLDER,LED ASSY(FOR TVCR D-27)
ZD01F	0DZ910009BA	DIODE,ZENER MTZ9.1B
ZD05	0DZ750009AA	DIODE,ZENER MTZ7.5B
ZD06	0DZ560009AA	DIODE,ZENER MTZ5.6B
ZD201	0DZ330009BA	DIODE,ZENER HZT33
ZD207	0DZ560009AA	DIODE,ZENER MTZ5.6B
* ZD2901	0DZ750009AA	DIODE,ZENER MTZ7.5B
* ZD2902	0DZ750009AA	DIODE,ZENER MTZ7.5B
* ZD2903	0DZ750009AA	DIODE,ZENER MTZ7.5B
ZD532	0DZ510009AB	DIODE,ZENER MTZ5.1B
ZD533	0DZ820009AA	DIODE,ZENER MTZ8.2B
ZD701	0DZ820009AA	DIODE,ZENER MTZ8.2B
ZD801	0DZ680009AA	DIODE,ZENER MTZ6.8B

* marked components for 14" model's location numbers have 1000 lower as R2902 for 20"/21" is R1902 for 14".

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LOCA. NO	PART NO	DESCRIPTION
ZD851	0DZ680009AA	DIODE,ZENER MTZ6.8B
ZD860	0DZ110009AA	DIODE,ZENER MTZ 11B
ZD861	0DZ360009DA	DIODE,ZENER MTZ3.6B
TRANSISTOR		
N02	0TR381000AB	TR,PT-381FBC PHOTO/TR
Q01	0TR103009AD	TR,KRC103M(AT) TO-92M TP KEC
Q01Y	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q02	0TR103009AD	TR,KRC103M(AT) TO-92M TP KEC
Q02Y	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q03	0TR103009AD	TR,KRC103M(AT) TO-92M TP KEC
Q400	0TR103009AH	TR,KRA103M(AT) TO-92M TP KEC
Q430	0TR320509AB	TR,KTC3205-Y (KTC2236A) TP KEC
Q503	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q504	0TR387500AA	TR,CHIP 2SC3875S(ALY) KEC
Q601	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q602	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q781	0TR249900AA	TR,TD2499 TO-3P(H)IS TOSHIBA
Q782	0TR320709AA	TR,KTC3207,TP(KTC2482),KEC
Q801	0TR385200AA	TR,2SC3852A SANKEN
Q851	0TR322809AA	TR,KTC3228-0 TP(KTC2383),KEC
Q852	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q853	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q854	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q860	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q861	0TR322809AA	TR,KTC3228-0 TP(KTC2383),KEC
Q862	0TR968000AA	TR,KTA968A-Y KEC
Q863	0TR319809AA	TR,KTC3198-TP-Y (KTC1815)KEC
Q864	0TR322709AA	TR,KTC3227-Y,TP(KTC1627A),KEC
S01	0TR381000AB	TR,PT-381FBC PHOTO/TR
S03	0TR352010AB	TR,RPI-352Q01 STICK PHOTO
S04	0TR352010AB	TR,RPI-352Q01 STICK PHOTO
CAPACITOR		
C01	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C01Y	0CX5100K409	C,TUBULA(T.C) 51P 50V J
C02F	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C02T	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C02Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C03F	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C03Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C04	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C04F	0CE477DF618	C,ELECTROLYTIC 470UF STD 16V M
C04T	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C04Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C05	0CX4700K409	C,TUBULA(T.C) 47PF 50V J
C05T	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C05Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C06	0CN2710K519	C,TUBULA(HIGH DIELE) 270PF 50V K
C06Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C07	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C07T	0CE1043K618	C,ELECTROLYTIC 0.1UF 50V M

LOCA. NO	PART NO	DESCRIPTION
C07Y	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C08	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C08F	0CQ1042K439	C,POLYESTER(MYLAR) 0.1UF S 50V J
C08Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C09F	0CE226DK618	C,ELECTROLYTIC 22UF STD 50V M
C09Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C10	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C10Y	0CX5100K409	C,TUBULA(T.C) 51P 50V J
C11F	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C11Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C12Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C13	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C13F	0CQ1042K439	C,POLYESTER(MYLAR) 0.1UF S 50V J
C13T	0CC1500K415	C,CERAMIC(TEMP COMP) 15P 50V J
C13Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C14F	0CQ6821N509	C,POLYESTER(MYLAR) 0.0068U 100V K
C14T	0CC1500K415	C,CERAMIC(TEMP COMP) 15P 50V J
C14Y	0CE476DF618	C,ELECTROLYTIC 47UF STD 16V M
C15F	0CE224DK618	C,ELECTROLYTIC 0.22UF STD 50V M
C16F	0CE225DK618	C,ELECTROLYTIC 2.2UF STD 50V M
C16Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C17Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C18	0CC1500K415	C,CERAMIC(TEMP COMP) 15P 50V J
C18F	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C18Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C19	0CC1500K415	C,CERAMIC(TEMP COMP) 15P 50V J
C19F	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C19Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C20F	0CE106DF618	C,ELECTROLYTIC 10UF STD 16V M
C20Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C206	0CE477DF618	C,ELECTROLYTIC 470UF STD 16V M
C208	0CE477DF618	C,ELECTROLYTIC 470UF STD 16V M
C21T	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C21Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C210	0CE476DK618	C,ELECTROLYTIC 47UF STD 50V M
C211	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C213	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C22Y	0CE476DF618	C,ELECTROLYTIC 47UF STD 16V M
C227	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C23	0CQ3331N509	C,POLYESTER(MYLAR) 0.033U 100V K
C23F	0CX4700K409	C,TUBULA(T.C) 47PF 50V J
C23Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C230	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C231	0CE2253K618	C,ELECTROLYTIC 2.2UF 50V M
C24	0CE477DF618	C,ELECTROLYTIC 470UF STD 16V M
C24Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C242	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C243	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C246	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C25	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C25Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C253	0CE3351K636	C,ELECTROLYTIC 3.3UF SM 50V M

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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LOCA. NO	PART NO	DESCRIPTION
C254	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C26Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C27Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C28Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C29	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C29F	0CE2253K618	C,ELECTROLYTIC 2.2UF 50V M
C29Y	0CE476DF618	C,ELECTROLYTIC 47UF STD 16V M
* C2901	0CN3310K519	C,TUBULA(HIGH DIELE) 330P 50V K
* C2902	0CN3310K519	C,TUBULA(HIGH DIELE) 330P 50V K
* C2903	0CN3310K519	C,TUBULA(HIGH DIELE) 330P 50V K
* C2904	181-013L	C,MPP 400V 0.08UF J
* C2911	0CE1061R618	C,ELECTROLYTIC 10M SM 250V M
* C2912	181-033T	CAPACITOR 2KV B 222K TP7.5
* C2919	0CE475DR618	C,ELECTROLYTIC 4.7UF STD 250V M
C3A3	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C30	181-002B	C,GOLD CAP. 47000MF/5.5V K
C30F	0CE2253K618	C,ELECTROLYTIC 2.2UF 50V M
C30Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C308	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C31	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C31Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C311	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C313	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C314	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C32	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C32F	0CE476DF618	C,ELECTROLYTIC 47UF STD 16V M
C32Y	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C320	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C321	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C326	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C328	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C33Y	0CE226DH618	C,ELECTROLYTIC 22UF STD 25V M
C331	0CE1053K616	C,ELECTROLYTIC 1UF SRE 50V M
C335	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C34	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C34Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C341	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C342	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C35	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C35Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C36Y	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C374	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C377	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C379	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C397	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C401	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C403	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C404	0CN2210K519	C,TUBULA(HIGH DIELE) 220PF 50V K
C405	0CQ3321N509	C,POLYESTER(MYLAR) 0.0033U 100V K
C406	0CQ1821N509	C,POLYESTER(MYLAR) 1800PF 100V K
C407	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C408	0CE4753K618	C,ELECTROLYTIC 4.7UF 50V M

LOCA. NO	PART NO	DESCRIPTION
C409	0CE1043K618	C,ELECTROLYTIC 0.1UF 50V M
C411	0CE1043K618	C,ELECTROLYTIC 0.1UF 50V M
C412	0CE4753K618	C,ELECTROLYTIC 4.7UF 50V M
C413	0CE1043K618	C,ELECTROLYTIC 0.1UF 50V M
C414	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C415	0CE2263F618	C,ELECTROLYTIC 22UF 16V M
C416	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C420	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C428	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C43	0CE2253K616	C,ELECTROLYTIC 2.2000UF SRE 50V M FL BP(D) TP
C430	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C431	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C432	0CE1063F618	C,ELECTROLYTIC 10UF 16V M
C433	0CQ6831N509	C,POLYESTER(MYLAR) 0.068U 100V K
C44	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C45	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C47	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C48	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C49	0CQ2231N509	C,POLYESTER(MYLAR) 0.022MF 100V K
C50	0CX4700K409	C,TUBULA(T.C) 47PF 50V J
C504	0CE106DF618	C,ELECTROLYTIC 10UF STD 16V M
C507	0CSZVTA001G	C,TANTALUM 2.2UF 25V K
C51	0CN1020K519	C,TUBULA(HIGH DIELE) 1000PF 50V K
C510	0CE475DK618	C,ELECTROLYTIC 4.7UF STD 50V M
C511	0CX4700K409	C,TUBULA(T.C) 47PF 50V J
C513	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C514	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C515	0CE225DK618	C,ELECTROLYTIC 2.2UF STD 50V M
C517	0CQ1042K439	C,POLYESTER(MYLAR) 0.1UF S 50V J
C518	0CE225DK618	C,ELECTROLYTIC 2.2UF STD 50V M
C520(20")	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
"(14")	0CE1043K618	C,ELECTROLYTIC 0.1UF 50V M
C522	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C523	0CQ2242K439	C,POLYESTER(MYLAR) 0.22UF S 50V J
C53	0CE1043K618	C,ELECTROLYTIC 0.1UF 50V M
C533(20")	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
"(14")	0CE1043K618	C,ELECTROLYTIC 0.1UF 50V M
C534	0CN1040K949	C,TUBULA(HIGH DIELE) 0.1M 50V Z
C535	0CN1040K949	C,TUBULA(HIGH DIELE) 0.1M 50V Z
C536	0CN1040K949	C,TUBULA(HIGH DIELE) 0.1M 50V Z
C54	0CE477DF618	C,ELECTROLYTIC 470UF STD 16V M
C540	0CQ1042K439	C,POLYESTER(MYLAR) 0.1UF S 50V J
C541	0CQ1042K439	C,POLYESTER(MYLAR) 0.1UF S 50V J
C543	0CC2210K415	C,CERAMIC(TEMP COMP) 220P 50V J NPO TP
C547	0CE227DF618	C,ELECTROLYTIC 220UF STD 16V M
C548	0CE2253K618	C,ELECTROLYTIC 2.2UF 50V M
C55	0CE2253K618	C,ELECTROLYTIC 2.2UF 50V M
C551	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C554	0CE4763F618	C,ELECTROLYTIC 47UF 16V M
C555	0CQ1042K439	C,POLYESTER(MYLAR) 0.1UF S 50V J
C556	0CQ1042K439	C,POLYESTER(MYLAR) 0.1UF S 50V J
C559	0CE4763F618	C,ELECTROLYTIC 47UF 16V M

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Replace only with part number specified.

LOCA. NO	PART NO	DESCRIPTION
C56	0CN1030F679	C,TUBULA(HIGH DIELE) 0.01MF 16V M
C566	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C57	0CE107DF618	C,ELECTROLYTIC 100UF STD 16V M
C573	0CE1074F618	C,ELECTROLYTIC 100UF 16V M
C580	0CE225DK618	C,ELECTROLYTIC 2.2UF STD 50V M
C59	0CE1053K616	C,ELECTROLYTIC 1UF SRE 50V M
C599	0CQ1041N455	C,POLYESTER(MYLAR) 0.1000UF 100V J PP NI FM7.5
C601	0CE475DK618	C,ELECTROLYTIC 4.7UF STD 50V M
C602	0CE226DK618	C,ELECTROLYTIC 22UF STD 50V M
C603	0CQ3931N509	C,POLYESTER(MYLAR) 0.039UF 100V K
C604	0CE106DH618	C,ELECTROLYTIC 10UF STD 25V M
C605	0CQ1041N509	C,POLYESTER(MYLAR) 0.1MF 100V L
C606	0CE227DJ618	C,ELECTROLYTIC 220UF STD 35V M FL TP5
C607	0CE227DF618	C,ELECTROLYTIC 220UF STD 16V M
C608	0CN1010K519	C,TUBULA(HIGH DIELE) 100PF 50V K
C610	0CE475DK618	C,ELECTROLYTIC 4.7UF STD 50V M
C70	0CC8200K415	C,CERAMIC(TEMP COMP) 82P 50V J
C701	181-009V	C,PP 200V 0.047UF K
C702	0CE2261R618	C,ELECTROLYTIC 22M SM 250V M
C703	0CK4710W515	C,CERAMIC(HIGH DIELE) 470PF 500V K
C704	0CE337DK618	C,ELECTROLYTIC 330UF STD 50V M
C705	0CK4710W515	C,CERAMIC(HIGH DIELE) 470PF 500V K
C708	0CE107DN618	C,ELECTROLYTIC 100UF STD 100V M
C709	0CK4710W515	C,CERAMIC(HIGH DIELE) 470PF 500V K
C71	0CC8200K415	C,CERAMIC(TEMP COMP) 82P 50V J
C72	0CE1053K618	C,ELECTROLYTIC 1UF 50V M
C731	0CN1010K519	C,TUBULA(HIGH DIELE) 100PF 50V K
C732	0CQ1041N509	C,POLYESTER(MYLAR) 0.1MF 100V L
C733	0CE337DK618	C,ELECTROLYTIC 330UF STD 50V M
C734	0CE476DN618	C,ELECTROLYTIC 47UF STD 100V M
C736	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C738	0CK3320W515	C,CERAMIC(HIGH DIELE) 3300P 500V K B TS
C739	0CN1020K519	C,TUBULA(HIGH DIELE) 1000PF 50V K
C781(20")	181-015K	C,MPP 1600V 0.0091uF H
" (14")	181-015J	C,MPP 1600V 0.0086uF H
C782	0CE105DP618	C,ELECTROLYTIC 1UF STD 160V M
C783(20")	0CK8210W515	C,CERAMIC(HIGH DIELE) 820PF 500V K
"(14")	0CK3310W515	C,CERAMIC(HIGH DIELE) 330PF 500V K
C784	0CN3310K519	C,TUBULA(HIGH DIELE) 330P 50V K
C785	0CE225DP618	C,ELECTROLYTIC 2.2UF STD 160V M
C786	0CK8210W515	C,CERAMIC(HIGH DIELE) 820PF 500V K
C787(20")	181-013D	CAPACITOR MPP 200V 0.43uF J
"(14")	181-013H	CAPACITOR MPP 200V 0.62uF J
⚠ C801	0CQZVBK002A	C,POLYESTER A.C 275V 0.1UF M
⚠ C802	0CQZVBK002A	C,POLYESTER A.C 275V 0.1UF M
C803	0CK10201515	C,CERAMIC(HIGH DIELE) 1000P 1KV K
C804	0CK10201515	C,CERAMIC(HIGH DIELE) 1000P 1KV K
C805	0CK10201515	C,CERAMIC(HIGH DIELE) 1000P 1KV K
C807	181-001H	C,AL.ELECTROLYTIC CE 400V 330UF M LUG (85)
C808	0CK1020W515	C,CERAMIC(HIGH DIELE) 1000PF 500V K
C809	0CE106DN618	C,ELECTROLYTIC 10UF STD 100V M
C810	0CE227BF618	C,ELECTROLYTIC 220UF KME 16V M

LOCA. NO	PART NO	DESCRIPTION
C811	181-014W	CAPACITOR MPP 2KV 0.0033UF J
C812	181-091J	CAPACITOR DE1107 R 821K 2KV TP7.5
⚠ C813	181-120E	C,ACT 4KV E 222M FL10
C814	0CE107DJ618	C,ELECTROLYTIC 100UF STD 35V M
C850	181-091C	C,DE0705 R 471K 1KV
C851	181-091C	C,DE0705 R 471K 1KV
C852	0CK4710W515	C,CERAMIC(HIGH DIELE) 470PF 500V K
C853	181-091C	C,DE0705 R 471K 1KV
C854	181-091C	C,DE0705 R 471K 1KV
C855	0CK4710W515	C,CERAMIC(HIGH DIELE) 470PF 500V K
C856	0CE107DN618	C,ELECTROLYTIC 100UF STD 100V M
C857	0CE108DH618	C,ELECTROLYTIC 1000UF STD 25V M
C858	0CE108DH618	C,ELECTROLYTIC 1000UF STD 25V M
C859	0CE108DJ618	C,ELECTROLYTIC 1000UF STD 35V M
C860	0CE227DP650	C,ELECTROLYTIC 220UF STD 160V M
C861	0CQ4742L439	C,POLYESTER 0.47UF S 63V J
C862	0CE228DF618	C,ELECTROLYTIC 2200UF STD 16V M
C863	0CE477DF618	C,ELECTROLYTIC 470UF STD 16V M
C864	0CE225DK618	C,ELECTROLYTIC 2.2UF STD 50V M
C865	0CE1071P650	C,ELECTROLYTIC 100M SM 160V M
C866	0CE227BF618	C,ELECTROLYTIC 220UF KME 16V M
C867	0CE477DH618	C,ELECTROLYTIC 470UF STD 25V M
C868	0CE228DF618	C,ELECTROLYTIC 2200UF STD 16V M
C869	0CK4710W515	C,CERAMIC(HIGH DIELE) 470PF 500V K
C870	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C872	0CQ1031N509	C,POLYESTER(MYLAR) 0.01U 100V K
C874	0CE477BH618	C,ELECTROLYTIC 470UF KME TYPE 25V M
C875	0CE228DD618	C,ELECTROLYTIC 2200UF STD 10V M
C876	0CE4741K636	C,ELECTROLYTIC 0.47UF SM 50V M
C877	0CE227DF618	C,ELECTROLYTIC 220UF STD 16V M
CORE		
FB651	125-123A	CORE,FERRITE BFD3565R2F
FB781	125-022K	CORE,FERRITE 1UH
FB801	125-022K	CORE,FERRITE 1UH
FB802	125-022K	CORE,FERRITE 1UH
FB803	125-123A	CORE,FERRITE BFD3565R2F
FB804	125-123A	CORE,FERRITE BFD3565R2F
FB805	125-123A	CORE,FERRITE BFD3565R2F
FB851	125-123A	CORE,FERRITE BFD3565R2F
L152	125-022K	CORE,FERRITE 1UH
L731	125-022K	CORE,FERRITE 1UH
FUSE		
⚠ F801	0FT3151B53C	FUSE,TIME LAG,3151MA 250 V 5.2X20 CY/CE SEMK
⚠ F851	131-096E	FUSE,MICRO 125V 4.0A
⚠ F852	131-096E	FUSE,MICRO 125V 4.0A
⚠ F853	131-096E	FUSE,MICRO 125V 4.0A
JACK		
JK01	380-401D	JACK ASSY,AV W/O EARPHONE
JK201	381-091A	SOCKET,SCART JACK 21PIN

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LOCA. NO	PART NO	DESCRIPTION
JK601	380-400A	JACK,HEADPHONE 3.5 STEREO C/A INS'
COIL & TRANSFORMER		
L01	0LA1000K139	INDUCTOR,100UH K
L01T	0LA0102K119	INDUCTOR,10UH K
L01Y	0LA0472K119	INDUCTOR,47UH K
L02	0LA1000K139	INDUCTOR,100UH K
L02T	0LA0102K119	INDUCTOR,10UH K
L02Y	0LA0472K119	INDUCTOR,47UH K
L03	0LA1000K139	INDUCTOR,100UH K
L03F	0LA0222K119	INDUCTOR,22UH K
L03T	0LA0102K119	INDUCTOR,10UH K
L03Y	0LA0472K119	INDUCTOR,47UH K
L04	0LA1000K139	INDUCTOR,100UH K
L04Y	0LA0472K119	INDUCTOR,47UH K
L05	0LA1000K139	INDUCTOR,100UH K
L05F	0LA0472K119	INDUCTOR,47UH K
L06	0LA1000K139	INDUCTOR,100UH K
L07	0LA1000K139	INDUCTOR,100UH K
L07F	0LA0122K119	INDUCTOR,12UH K
L08	0LA1000K139	INDUCTOR,100UH K
L08F	0LA0122K119	INDUCTOR,12UH K
L09	0LA0681K119	INDUCTOR,6.8UH K
L09F	0LA0102K119	INDUCTOR,10UH K
L11F	0LA0102K119	INDUCTOR,10UH K
L201	0LA0152K119	INDUCTOR,15UH K
L203	0LA1000K139	INDUCTOR,100UH K
L204	150-C01G	COIL,CHOKE 1.0UH A 1105
L205	0LA1000K139	INDUCTOR,100UH K
L207	0LA0152K119	INDUCTOR,15UH K
L208	0LA0472K119	INDUCTOR,47UH K
L209	0LA0472K119	INDUCTOR,47UH K
L210	0LA0102K119	INDUCTOR,10UH K
L212	0LA0102K119	INDUCTOR,10UH K
L213	0LA0102K119	INDUCTOR,10UH K
L251	0LA0102K119	INDUCTOR,10UH K
* L2901	0LA0102K139	INDUCTOR,10UH K
L302	0LA0222K119	INDUCTOR,22UH K
L303	0LA0272K119	INDUCTOR,27UH K
L304	0LA0222K119	INDUCTOR,22UH K
L309	0LA0222K119	INDUCTOR,22UH K
L310	0LA0561K119	INDUCTOR,5.6UH K
L311	0LA0821K119	INDUCTOR,8.2UH K
L312	0LA1500K119	INDUCTOR,150UH K
L315	0LA0682K119	INDUCTOR,68UH K
L350	0LA0821K119	INDUCTOR,8.2UH K
L353	0LA0152K119	INDUCTOR,15UH K
L354	0LA1000K119	INDUCTOR,100UH K
L355	0LA0152K119	INDUCTOR,15UH K
L356	0LA0152K119	INDUCTOR,15UH K
L357	0LA1800K119	INDUCTOR,180UH K
L358	0LA0222K119	INDUCTOR,22UH K
L359	0LA0272K119	INDUCTOR,27UH K
L360	0LA0222K119	INDUCTOR,22UH K
L361	0LA0222K119	INDUCTOR,22UH K
L371	0LA0822K119	INDUCTOR,82UH K
L372	0LA2200K119	INDUCTOR,220UH K
L401	0LA1000K139	INDUCTOR,100UH K
L402	0LA1000K139	INDUCTOR,100UH K
L403	0LA0102K119	INDUCTOR,10UH K
L502	0LA0122K119	INDUCTOR,12UH K
L503	0LA0681K119	INDUCTOR,6.8UH K
L504	0LA0102K119	INDUCTOR,10UH K
L505	150-E11H	COIL,VAR,07S 1C 38.0MHZ
L506	0LA1000K119	INDUCTOR,100UH K
L507	0LA0222K119	INDUCTOR,22UH K
L508	0LA0332K119	INDUCTOR,33UH K
L509	0LA1000K119	INDUCTOR,100UH K
L510	0LA0102K119	INDUCTOR,10UH K
L511	0LA0102K119	INDUCTOR,10UH K
L531	0LA0102K119	INDUCTOR,10UH K
L533	0LA0102K119	INDUCTOR,10UH K
L652	0LA0101K119	INDUCTOR,1.0UH K
L653	0LA0102K119	INDUCTOR,10UH K
L654	0LA0102K119	INDUCTOR,10UH K
L732	0LA0332K039	INDUCTOR,33UH 10%
L733	0LA0102K139	INDUCTOR,10UH K
L734	0LA0102K139	INDUCTOR,10UH K
L782(20")	150-L02C	COIL,H-LINEARITY 170UH
"(14")	150-L01W	COIL,H-LINEARITY 57UH
⚠ L801	150-F06F	COIL,LINE FILTER SQE2424 19MH
⚠ L802	150-F06H	COIL,LINE FILTER SQE2930 30MH
L851	150-C02E	COIL,CHOKE 50UH R 1217
T401	150-B05C	COIL,L/C FILTER(07S) LPF
T402	150-E06A	COIL,VAR,07S 6F 252KHZ
T781	151-C02H	TRANSFORMER,H-DRIVE,EI-19,BULK
⚠ T801	151-A04D	TRANSFORMER,EER4445 STR6707
VL01F	150-E05B	COIL,VAR,07S 1B 77.8MHZ
RESISTOR		
* FR2901	180-D02D	R,RNF RND(S) EQ 2W 0.68 J
FR2902(20")	180-D02D	R,RNF RND(S) EQ 2W 0.68 J
⚠ FR701	0RF0561H609	R,FUSIBLE 5.6 1/2W 5
⚠ FR702	0RF0470J607	R,FUSIBLE 0.47 1W 5%
⚠ FR704	0RF0101H609	R,FUSIBLE 1.0 1/2W 5
FR851	0RF0470H609	R,FUSIBLE 0.47 1/2W 5
FR852	180-D02E	R,RNF RND(S) CR 2W 1.0 J
⚠ FR854	0RF0101J607	R,FUSIBLE 1 1W 5%
R01F	0RD0472F609	R,CARBON FILM 47 1/6W 5
R01Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R02	0RD5600F609	R,CARBON FILM 560 1/6W 5
R02Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R03	0RD5600F609	R,CARBON FILM 560 1/6W 5
R03Y	0RD3900F609	R,CARBON FILM 390 1/6W 5

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LOCA. NO	PART NO	DESCRIPTION
R04	0RD2200F609	R,CARBON FILM 220 1/6W 5
R04Y	0RD0472F609	R,CARBON FILM 47 1/6W 5
R05	0RD2200F609	R,CARBON FILM 220 1/6W 5
R05Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R06Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R07T	0RN1802F409	R,METAL FILM 18K 1/6W 1%
R07Y	0RD2700F609	R,CARBON FILM 270 1/6W 5
R08	0RD2200F609	R,CARBON FILM 220 1/6W 5
R08Y	0RD2700F609	R,CARBON FILM 270 1/6W 5
R09	0RD2200F609	R,CARBON FILM 220 1/6W 5
R09Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R10Y	0RD2702F609	R,CARBON FILM 27K 1/6W 5
R107	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R108	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R11Y	0RD0472F609	R,CARBON FILM 47 1/6W 5
R111	0RD5602F609	R,CARBON FILM 56K 1/6W 5
R115	0RD1000F609	R,CARBON FILM 100 1/6W 5
R116	0RD1502F609	R,CARBON FILM 15K 1/6W 5
R119	0RD1000F609	R,CARBON FILM 100 1/6W 5
R12T	0RD0561F609	R,CARBON FILM 5.6 1/6W 5
R12Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R13T	0RD1000F609	R,CARBON FILM 100 1/6W 5
R13Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R130	0RD4702F609	R,CARBON FILM 47K 1/6W 5
R131	0RD4702F609	R,CARBON FILM 47K 1/6W 5
R14Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R15Y	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R16Y	0RD1000F609	R,CARBON FILM 100 1/6W 5
R17F	0LA0102K119	INDUCTOR 10UH K
R18T	0RN1001F409	R,METAL FILM 1K 1/6W 1%
R19	0RD1004F609	R,CARBON FILM 1.0M 1/6W 5
R20	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R204	0RD0472F609	R,CARBON FILM 47 1/6W 5
R206	0RD0102F609	R,CARBON FILM 10 1/6W 5
R211	0RD4702F609	R,CARBON FILM 47K 1/6W 5
R214	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R215	0RS4700H609	R,METAL FILM OXIDE 470 1/2W 5
R220	0RD0752F609	R,CARBON FILM 75 1/6W 5
R225	0RD4700F609	R,CARBON FILM 470 1/6W 5
R233	0RD0472F609	R,CARBON FILM 47 1/6W 5
R234	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R236	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R238	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R239	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R240	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R247	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R248	0RD4702F609	R,CARBON FILM 47K 1/6W 5
R250	0RD6802F609	R,CARBON FILM 68K 1/6W 5
R256	0RD2200F609	R,CARBON FILM 220 1/6W 5
R27	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R27F	0RD2202F609	R,CARBON FILM 22K 1/6W 5
R28F	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5

LOCA. NO	PART NO	DESCRIPTION
* R2901	0RD3900F609	R,CARBON FILM 390 1/6W 5
* R2902	0RD2001F609	R,CARBON FILM 2.0K 1/6W 5
* R2903	0RD3900F609	R,CARBON FILM 390 1/6W 5
* R2904	0RD2001F609	R,CARBON FILM 2.0K 1/6W 5
* R2905	0RD2001F609	R,CARBON FILM 2.0K 1/6W 5
* R2906	0RD3900F609	R,CARBON FILM 390 1/6W 5
* R2911	0RD2201H609	R,CARBON FILM 2.2K 1/2W 5
* R2915	0RD2201H609	R,CARBON FILM 2.2K 1/2W 5
* R2919	0RD2201H609	R,CARBON FILM 2.2K 1/2W 5
* R2924	0RD2204H609	R,CARBON FILM 2.2M 1/2W 5
R30F	0RD0102F609	R,CARBON FILM 10 1/6W 5
R32F	0RD2202F609	R,CARBON FILM 22K 1/6W 5
R35F	0RD0512F609	R,CARBON FILM 51 1/6W 5
R36	0RD2200F609	R,CARBON FILM 220 1/6W 5
R36F	0RD0512F609	R,CARBON FILM 51 1/6W 5
R38	0RD2200F609	R,CARBON FILM 220 1/6W 5
R401	0RD0102F609	R,CARBON FILM 10 1/6W 5
R41	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R417	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R42	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R43	0RD2200F609	R,CARBON FILM 220 1/6W 5
R431	0RD2702F609	R,CARBON FILM 27K 1/6W 5
R434	0RD0472F609	R,CARBON FILM 47 1/6W 5
R435	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R439	0RD4702F609	R,CARBON FILM 47K 1/6W 5
R44	0RD2200F609	R,CARBON FILM 220 1/6W 5
R442	0RD0472F609	R,CARBON FILM 47 1/6W 5
R45	0RD2200F609	R,CARBON FILM 220 1/6W 5
R451	0RD8200F609	R,CARBON FILM 820 1/6W 5
R452	0RD1201F609	R,CARBON FILM 1.2K 1/6W 5
R453	0RD1801F609	R,CARBON FILM 1.8K 1/6W 5
R454	0RD3301F609	R,CARBON FILM 3.3K 1/6W 5
R49	0RD2201F609	R,CARBON FILM 2.2K 1/6W 5
R509	0RN3902F409	R, METAL FILM 39K 1/6W 1%
R51	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R522	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R523	0RD1000F609	R,CARBON FILM 100 1/6W 5
R524	0RD1000F609	R,CARBON FILM 100 1/6W 5
R525	0RD1000F609	R,CARBON FILM 100 1/6W 5
R531	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R532	0RD2200F609	R,CARBON FILM 220 1/6W 5
R533	0RD2200F609	R,CARBON FILM 220 1/6W 5
R534	0RD2200F609	R,CARBON FILM 220 1/6W 5
R537	0RD1502F609	R,CARBON FILM 15K 1/6W 5
R538	0RD0102F609	R,CARBON FILM 10 1/6W 5
R54	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R545	0RD0472F609	R,CARBON FILM 47 1/6W 5
R547	0RD1500H609	R,CARBON FILM 150 1/2W 5
R55	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R550	0RD1000F609	R,CARBON FILM 100 1/6W 5
R551	0RD1000F609	R,CARBON FILM 100 1/6W 5
R552	0RD1000F609	R,CARBON FILM 100 1/6W 5

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Replace only with part number specified.

* marked components for 14" model's location numbers have 1000 lower as R2902 for 20"/21" is R1902 for 14".

LOCA. NO	PART NO	DESCRIPTION
R56	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R57	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R58	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R59	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R601	0RD1003F609	R,CARBON FILM 100K 1/6W 5
R602	0RD1003F609	R,CARBON FILM 100K 1/6W 5
R603	0RD1003F609	R,CARBON FILM 100K 1/6W 5
R604	0RS0221H609	R,METAL FILM OXIDE 2.2 1/2W 5
R605	0RD6802F609	R,CARBON FILM 68K 1/6W 5
R606	0RD8201F609	R,CARBON FILM 8.2K 1/6W 5
R607	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R608	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R609	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R61	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R610	0RD1201F609	R,CARBON FILM 1.2K 1/6W 5
R611	0RD1003F609	R,CARBON FILM 100K 1/6W 5
R62	0RD2200F609	R,CARBON FILM 220 1/6W 5
R63	0RD2200F609	R,CARBON FILM 220 1/6W 5
R64	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R65	0RD1203F609	R,CARBON FILM 120K 1/6W 5
R651	0RD2000H609	R,CARBON FILM 200 1/2W 5
R652	0RD2000H609	R,CARBON FILM 200 1/2W 5
R653	0RD0102F609	R,CARBON FILM 10 1/6W 5
R70	0RD5601F609	R,CARBON FILM 5.6K 1/6W 5
R702	0RS4702H609	R,METAL FILM OXIDE 47K 1/2W 5
R703(20")	0RD1003H609	R,CARBON FILM 100K 1/2W 5
"(14")	0RD1503H609	R,CARBON FILM 150K 1/2W 5
R704	0RD2203H609	R,CARBON FILM 220K 1/2W 5
R706	0RD2701H609	R,CARBON FILM 2.7K 1/2W 5
R731(20")	0RN1501F409	R,METAL FILM 1.5K 1/6W 1 TA52
"(14")	0RN2001F409	R,METAL FILM 2K 1/6W 1 TA52
R732	0RN1803F409	R,METAL FILM 180K 1/6W 1% TA52
R733	0RN0680J607	R,METAL FILM OXIDE 0.68 1W 5% TA62
R734	0RD0202F609	R,CARBON FILM 20 1/6W 5 TA52
R737	0RS2702J607	R,METAL FILM OXIDE 27K 1W 5% TA62
R739	0RS2200J607	R,METAL FILM OXIDE 220 1W 5%
R74	0RD5601F609	R,CARBON FILM 5.6K 1/6W 5
R740(14")	0RN3901F609	R,METAL FILM 3.9K 1/6W 1
R741(14")	0RN3303F609	R,METAL FILM 330K 1/6W 1
R76	0RD4703F609	R,CARBON FILM 470K 1/6W 5
R77	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R78	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R781	0RD0392H609	R,CARBON FILM 39 1/2W 5
R782	0RD3301H609	R,CARBON FILM 3.3K 1/2W 5
R783	0RS4701K607	R,METAL FILM OXIDE 4.70K 2W 5%
R784	0RD4700F609	R,CARBON FILM 470 1/6W 5
R785	0RS1202K607	R,METAL FILM OXIDE 12K 2W 5%
R786	0RD1801H609	R,CARBON FILM 1.8K 1/2W 5
R787(20")	0RS2701K607	R,METAL FILM OXIDE 2.70K 2W 5%
"(14")	0RS6801K607	R,METAL FILM OXIDE 6.80K 2W 5%
R788	0RD0912F609	R,CARBON FILM 91 1/6W 5
R79	0RS0161H609	R,METAL FILM OXIDE 1.6 1/2W 5

LOCA. NO	PART NO	DESCRIPTION
R80	0RS0161H609	R,METAL FILM OXIDE 1.6 1/2W 5
R801	180-A03A	R,RW RECT G 5W 2.2 J DOUBLE
R803	0RD1503H609	R,CARBON FILM 150K 1/2W 5
R804	0RD1503H609	R,CARBON FILM 150K 1/2W 5
R805	0RS2202K607	R,METAL FILM OXIDE 22K 2W 5%
R806	0RS2202K607	R,METAL FILM OXIDE 22K 2W 5%
R807	0RS2002H609	R,METAL FILM OXIDE 20K 1/2W 5
R808	0RD3001F609	R,CARBON FILM 3.0K 1/6W 5
R809	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R810	0RS0222K607	R,METAL FILM OXIDE 22 2W 5%
R811	180-A01H	R,RW ROUND G 2W 0.27 J
R812	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
⚠ R813	180-C02H	R,CARBON COMPOSIT RC 1/2W 8.2M K
R815	0RD0821H609	R,CARBON FILM 8.2 1/2W 5 TA52
R821	0RD5101H609	R,CARBON FILM 5.1K 1/2W 5
R822	0RD1000H609	R,CARBON FILM 100 1/2W 5
R851	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R852	0RD3301F609	R,CARBON FILM 3.3K 1/6W 5
R853	0RD6201F609	R,CARBON FILM 6.2K 1/6W 5
R854	0RD2001F609	R,CARBON FILM 2.0K 1/6W 5
R855	0RD2701F609	R,CARBON FILM 2.7K 1/6W 5
R856	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R857	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R858	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R859	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R860	0RS4700J607	R,METAL FILM OXIDE 470 1W 5% TA62
R863	0RS0221J607	R,METAL FILM OXIDE 2.20 1W 5% TA62
R866	0RS0470H609	R,METAL FILM OXIDE 0.47 1/2W 5%
R867	0RS0121K607	R,METAL FILM OXIDE 1.20 2W 5% TA62
R87	0RD2200F609	R,CARBON FILM 220 1/6W 5
R870	0RD1002F609	R,CARBON FILM 10K 1/6W 5
R871	0RD2002F609	R,CARBON FILM 20K 1/6W 5
R872	0RD2002H609	R,CARBON FILM 20K 1/2W 5
R873	0RD1001H609	R,CARBON FILM 1.0K 1/2W 5
R874	0RS0102J607	R,METAL FILM OXIDE 10 1W 5%
R875	0RD4701F609	R,CARBON FILM 4.7K 1/6W 5
R876	0RD4700F609	R,CARBON FILM 470 1/6W 5
R877	0RS0331H609	R,METAL FILM OXIDE 3.3 1/2W 5
R88	0RD2200F609	R,CARBON FILM 220 1/6W 5
R89	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R899	0RS0331J607	R,METAL FILM OXIDE 3.30 1W 5%
R90	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
R92	0RD1803F609	R,CARBON FILM 180K 1/6W 5
R99	0RD1001F609	R,CARBON FILM 1.0K 1/6W 5
VR01	180-F03H	R,SEMI-FIX(H) EVN-DJAA03 B103
VR01F	180-F03J	R,SEMI-FIX(H) EVN-DJAA03 B203
VR401	180-F03M	R,SEMI-FIX(H) EVN-DJAY03 B204

SWITCH

SW01	140-315A	SWITCH,TACT VERT
SW02	140-315A	SWITCH,TACT VERT
SW03	140-315A	SWITCH,TACT VERT

* marked components for 14" model's location numbers have 1000 lower as R2902 for 20"/21" is R1902 for 14".

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

LOCA. NO	PART NO	DESCRIPTION
SW04	140-315A	SWITCH,TACT VERT
SW05	140-315A	SWITCH,TACT VERT
SW06	140-315A	SWITCH,TACT VERT
SW07	140-315A	SWITCH,TACT VERT
SW08	140-315A	SWITCH,TACT VERT
SW09	140-315A	SWITCH,TACT VERT
SW10	140-347A	SWITCH,DETECTOR KPD-1101(1MA/DC5V)
SW11	140-313B	SWITCH,TACT 2LEAD 160G H:5MM HORI(TA)
SW11	140-348A	SWITCH,DETECTOR KPD-1102(1MA/DC5V)
SW12	140-313B	SWITCH,TACT 2LEAD 160G H:5MM HORI(TA)
SW13	140-313B	SWITCH,TACT 2LEAD 160G H:5MM HORI(TA)
SW14	140-313B	SWITCH,TACT 2LEAD 160G H:5MM HORI(TA)
⚠ SW851	140-289A	SWITCH,SDDF3PASP013(GS-ALPS) TV8
		FILTER & CRYSTAL
F02F	166-B02D	FILTER,B.P FILTER SFSH6.0MCB-TF21
F201	166-F01G	FILTER,EMI,DSS306-93FZ103N 100V TA
F202	166-F01G	FILTER,EMI,DSS306-93FZ103N 100V TA
F203	166-F01G	FILTER,EMI,DSS306-93FZ103N 100V TA
F501	166-B02D	FILTER,B.P FILTER SFSH6.0MCB-TF21
T01F	166-C04B	FILTER,TRAP TPWA03B-TF21(5.5/6.0)
T201	166-C06D	FILTER(CIRC),TRAP MKT40.4MA110P-TF01
T202	166-C06D	FILTER(CIRC),TRAP MKT40.4MA110P-TF01
T203	166-C06D	FILTER(CIRC),TRAP MKT40.4MA110P-TF01
T502	166-C04B	FILTER,TRAP TPWA03B-TF21(5.5/6.0)
X01	156-A01T	CRYSTAL,10.000000 12PF 30 OHM BULK
X01T	156-A02D	CRYSTAL,13.875000 16PF 30 OHM BULK
X02	156-A08A	CRYSTAL,32.7680KHZ +-10PPM
X301	156-A01V	CRYSTAL,4.433619 SER.PF 80 OHM BULK
X502	156-A01V	CRYSTAL,4.433619 SER.PF 80 OHM BULK
Z01F	166-A01Q	FILTER, OFWJ1952M
Z501	166-A01Q	FILTER, OFWJ1952M
		MISCELLANEOUS
	132-199C	ANTENNA,ROD (W/ADAPTER L=500) 14”
	4980V00017B	SUPPORTER,SHIELD BOTTOM & DECK(SUS)
	4980V00055A	SUPPORTER,TUNER,CURRENT INJACTION ET CE,
	6710V00005F	REMOTE CONTROLLER,W SL/LP W TEXT,KI-20U72X
	6710V00005J	REMOTE CONTROLLER,W/O TXT,W/SP,LP
	6710V00005H	REMOTE CONTROLLER,W TXT,W/SP,LP,KI-14U71X
RC01	106-047E	PRE-AMP SBX1920-72(CHINA)
* SG2901	165-004A	SPARK GAP AG20PT 152F-L3N/S-23
* SG2904	165-004A	SPARK GAP AG20PT 152F-L3N/S-23
⚠ TH801	163-051A	THERMISTOR J5 03 P5 3D 140M 290S
TU01	113-234J	TUNER TUGG9-B07F PAL 38.9MHZ FS
"	113-234K	TUNER TUGG9-D07F PAL 38.9MHZ FS *1TUNER
TU01F	450-A20D	MODULATOR,RF SPLITTER, MDZY9-801A PAL CE
TU02F	113-234J	TUNER TUGG9-B07F LGEC PAL 38.9MHZ FS
VA801	164-003D	VARISTOR,SVC 561D-14A
⚠ T701	6174Z-6001C	FBT FTMPN11-T6001C 20"
⚠ "	6174Z-6001E	FBT FTMPN11-T6001E 14"

PV-71A MAIN2 SCHEMATIC DIAGRAM

NOTICE
Since this is a basic schematic diagram, The value of components and some partical connection aresubject to change for improvement.

The components marked ⚠ conform to VDE or IEC guidelines and are essential for safe operation of the set. while those marked ⚠ are required for correct operation. Use specified parts only when replacing.

VALUE OF RESISTER, CAPACITOR AND INDUCTOR

1. Resistances are shown in ohm, K = 1,000 M = 1,000,000 .
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expresses in mfd and the values more than 1 in pF
3. Unless otherwise noted in schematic, all coil values more . than 1 are expressed in uH, and the values less than 1 in H.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltages 220 Volts, colour bar signal
2. Voltages reading may very ±20%.
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
5. Check FINE TUNING, AGC, BRIGHTNESS, CONTRAST and COLOUR controls for best picture, make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS controls is almost in maximum position.
6. Waveforms are takrn using a standard colour bar signal.

20/21 INCH CPT BOARD

14 INCH CPT BOARD

★TABLE OF INCH CONVERSION

NO	CIRCUIT NO	INCH 21"	INCH 20"	INCH 14"	REMARK
1	R787	2.7K	2.7K	6.8K	RESISTOR, RS 2W
2	R732	–	180K	–	RESISTOR, RD 1/6W
3	R740	–	–	4.7K	RESISTOR, RN 1/6W
4	C783	820P	820P	330P	CAPACITOR, CK 500V
5	R702	47K	47K	47K	RESISTOR, RS 0.5W
6	R703	100K	100K	110k	RESISTOR, RD 0.5W
7	FR901	1	0.68	2.4	RESISTOR, RF 2W
8	FR902	0.68	0.68	–	RESISTOR, RF 2W
9	C781	0.0091u	0.0091u	0.0086u	CAPACITOR, MPP 1.6K
10	C787	0.47	0.43	0.62u	CAPACITOR, MPP 200V
11	L782	-L01W	-L02C	-L01W	COIL, LINEARITY(150-)
12	D706	1S2471	1S2471	TIN WIRE	DIODE
13	T701	-6001C	-6001C	-6001E	FBT (6174Z-)
14	P901A	-A04D	-A04C	-A04A	CONNECTOR, 4P(387-)
15		6620VBC001A	6620VBC001A	381-100F	CPT SOCKET
16		-852D	-852C		CPT EARTH LEAD(170-)
17	CPT BOARD	29XX	29XX	19XX	CPT BOARD CIRCUIT NO
18					

V
H
VIDEO
AUDIO
WAVE FORM

KEY BOARD

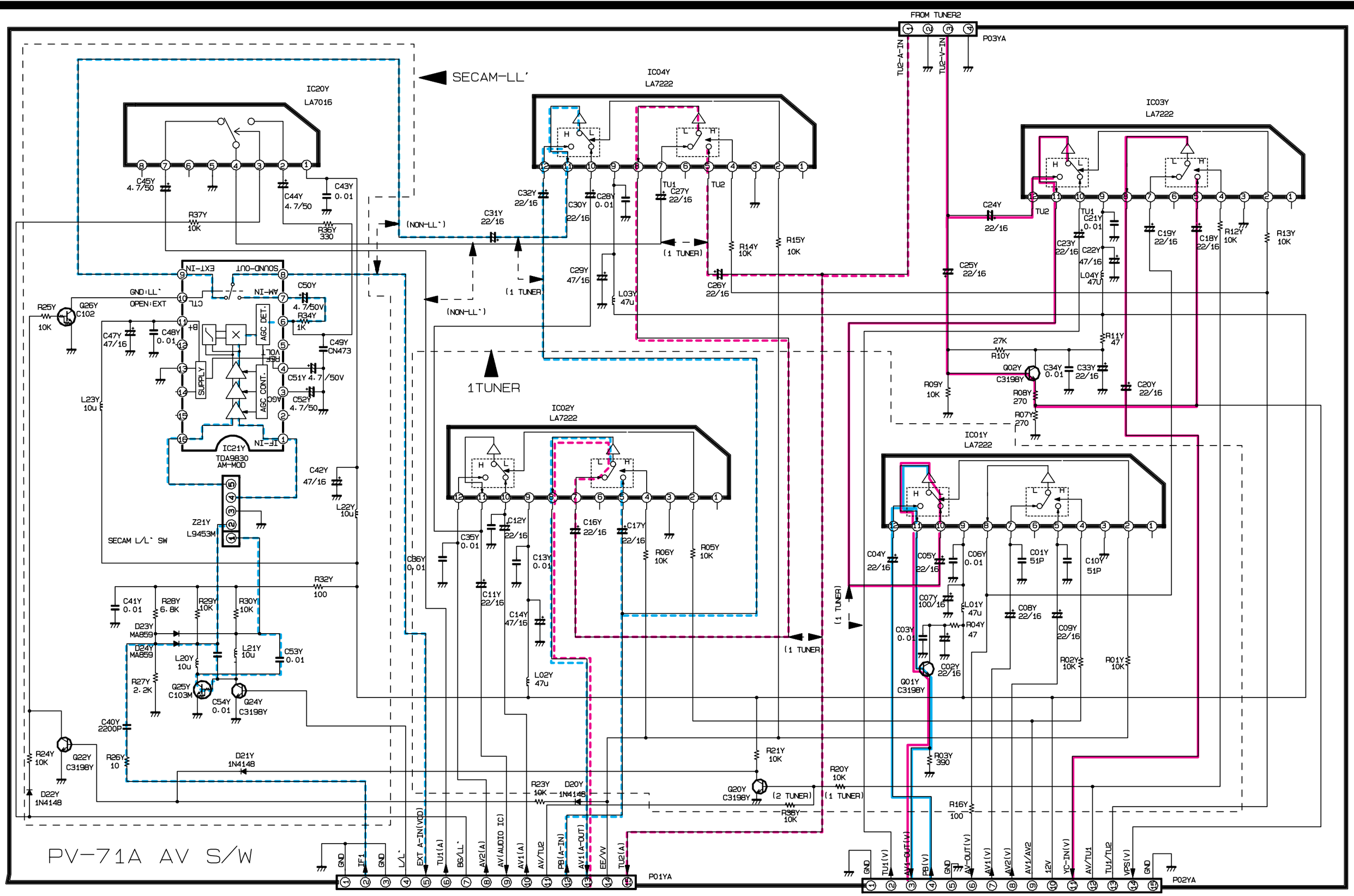
CIR NBR	OPTION	
D06	TXT/CAGHS+	0:ON X:OFF
D07	VPS	0:VPS
D08	VPS/PDC	0:PDC
D09	TXT LANGUAGE	00:WEST 01:TURKEY
D10	TXT LANGUAGE	10:EAST 11:RUSSIA
D11	SECAM-H/-L'	0:L/L' delete
D20	SECAM/MESECAM	0:SE/ME del
D21	SP/LP	0:SP/LP X:SP
D22	2HD/4HD	ONLY 2HD
D23	SHOWVIEW	
D24	NC	
D25	NC	

OPTION
VPS/PDC

(1 TUNER)

EE VIDEO
EE AUDIO
CAPSTAN CONTROL
PB VIDEO
PB AUDIO
DRUM CONTROL

PV-71A MAIN 980310



SECAM LL' or PB Audio

PB Audio

REC(Sub Tuner) Audio

REC(Sub Tuner) Video

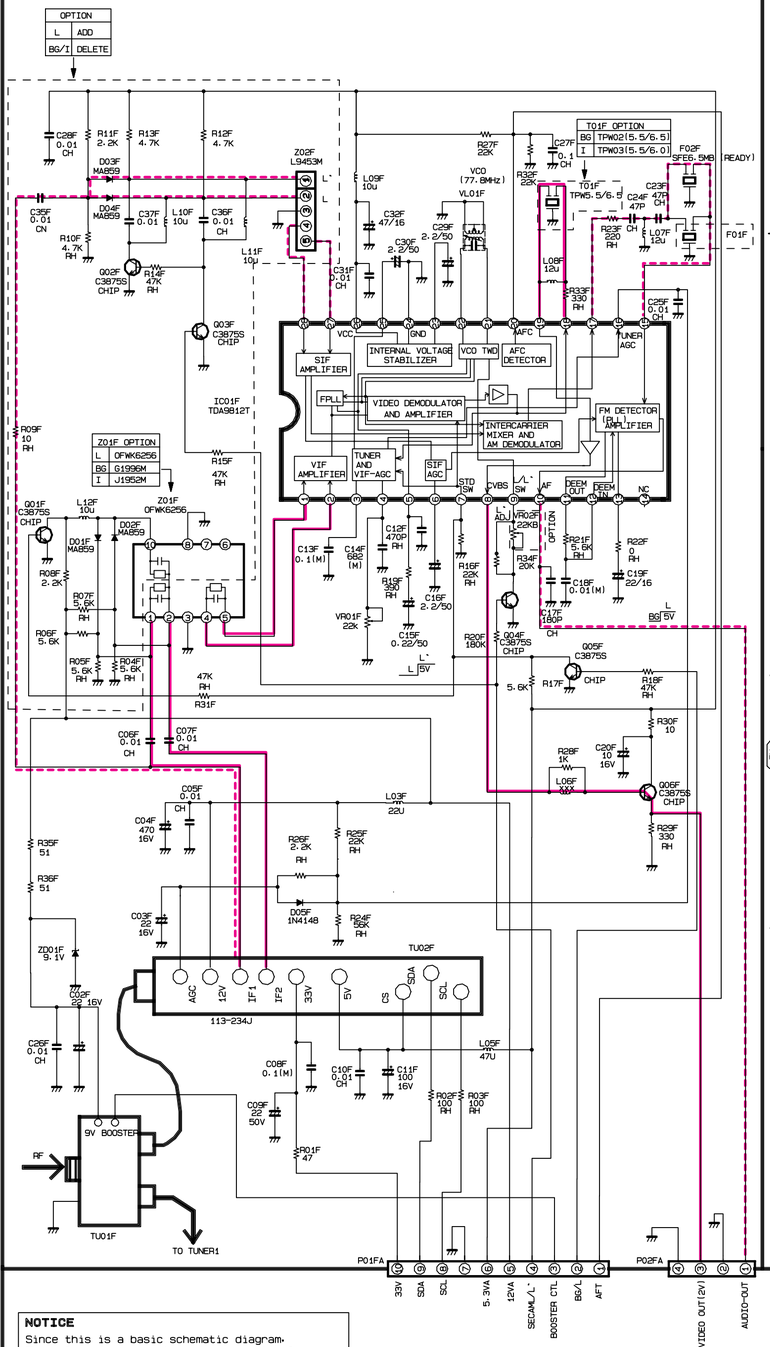
3854VA0028A (980415)

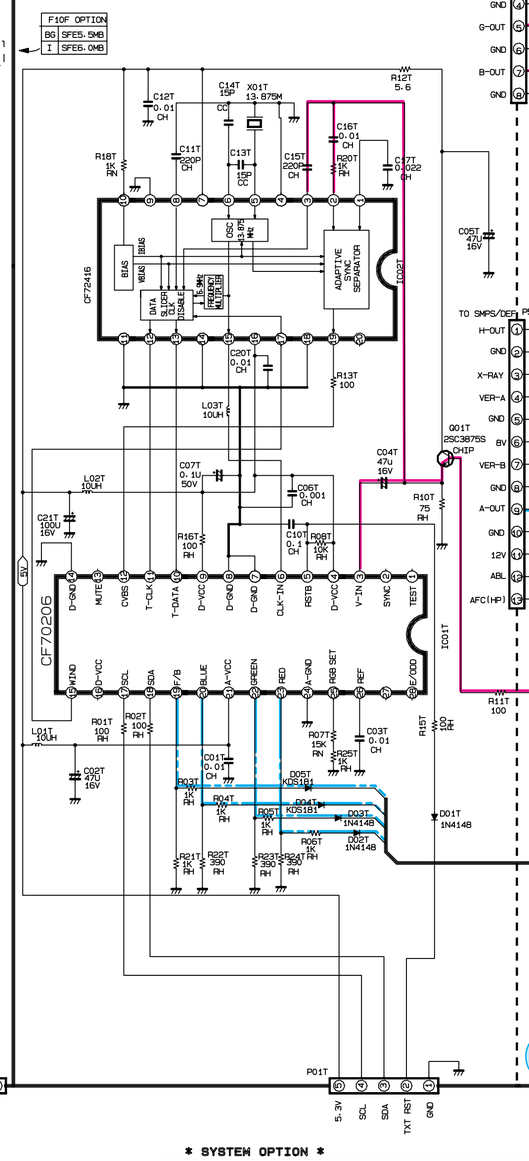
PV-71A SCHEMATIC DIAGRAM

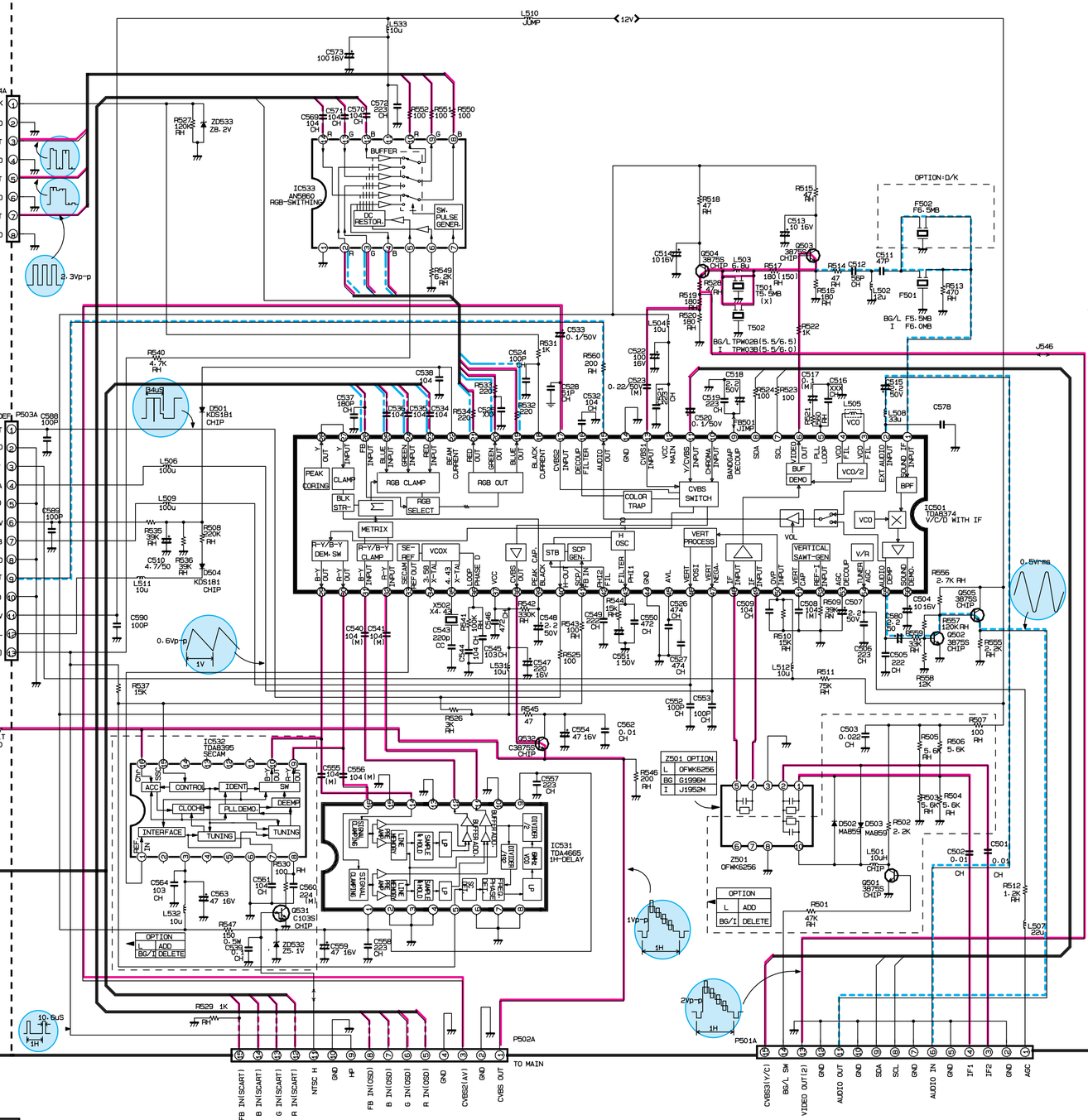
SUB-IF (OPTION)

TEXT (OPTION)

VIEDO/CHROMA







NOTICE

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2. Unless otherwise noted in schematic. all capacitor values less than 1 are expresses in mfd and the values more than 1 in pF
3. Unless otherwise noted in schematic. all coil values more . than 1 are expressed in uH. and the values less than 1 in H.

OBSERVATION OF VOLTAGES AND WAVEFORMS

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2. Voltages reading may very ±20%.
3. The schematic shown is representative only.
4. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
5. Check FINE TUNING. AGC. BRIGHTNESS. CONTRAST and COLOUR controls for best picture. make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS controls is almost in maximum position.
6. Waveforms are takrn using a standard colour bar signal.

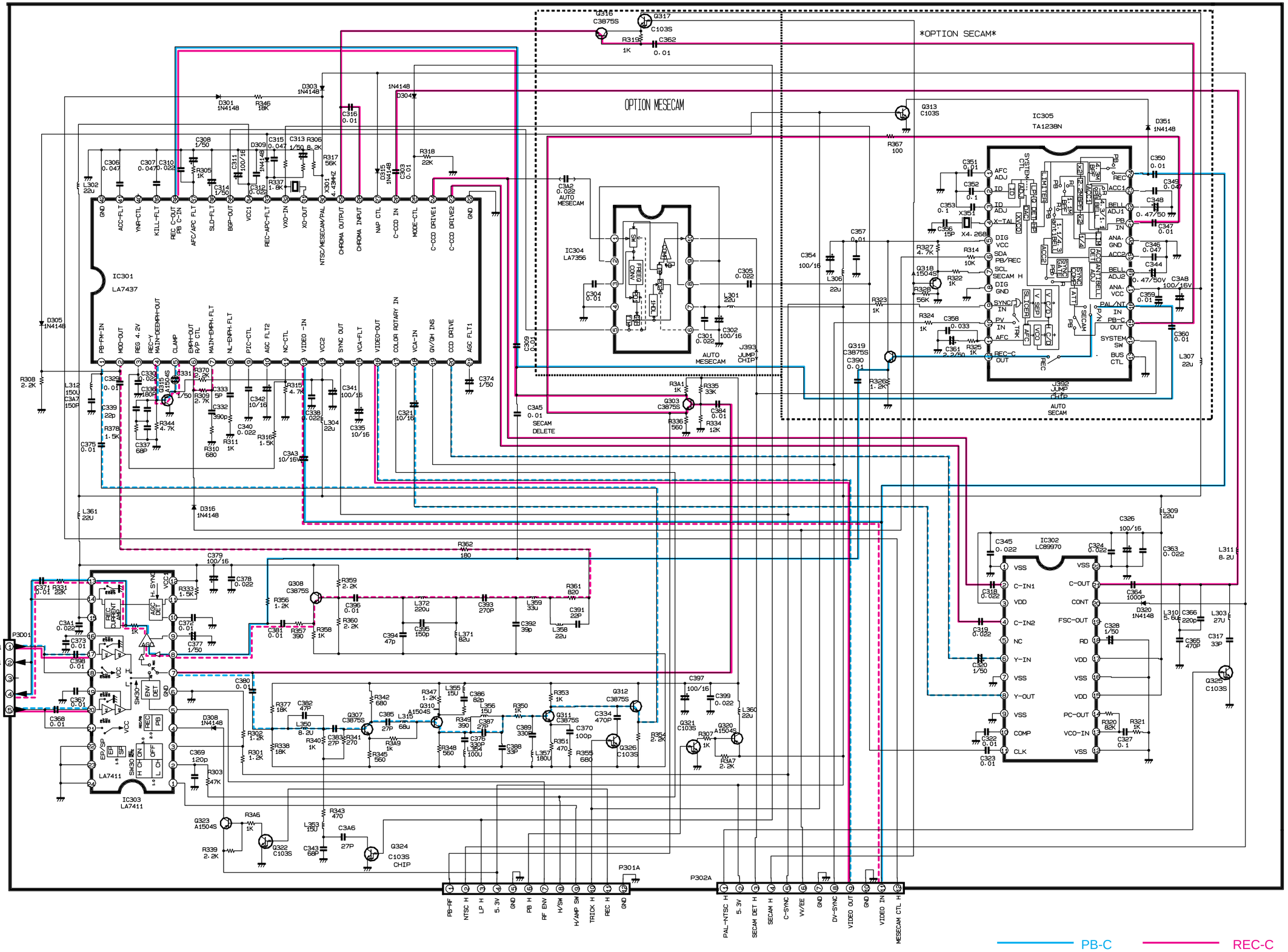
*** SYSTEM OPTION ***

NO	KL	KB	KI
Z501	K6256K	G1966M	J1952M
IC532	TDA8395	-	-
Z01F	K6256K	G1966M	J1952M
Z02F	L9453M	-	-
F501	F5.5MB	F5.5MB	F6.0MB
T502	TPW02B	TPW02B	TPW03B
F01F	F5.5MB	F5.5MB	F6.0MB
T01F	TPW02B	TPW02B	TPW03B

REC VIDEO
REC AUDIO
OSD R/G/B/FB
SCART R/G/B/FB
AUDIO
TEXT R/G/B/FBN
WAVE FORM

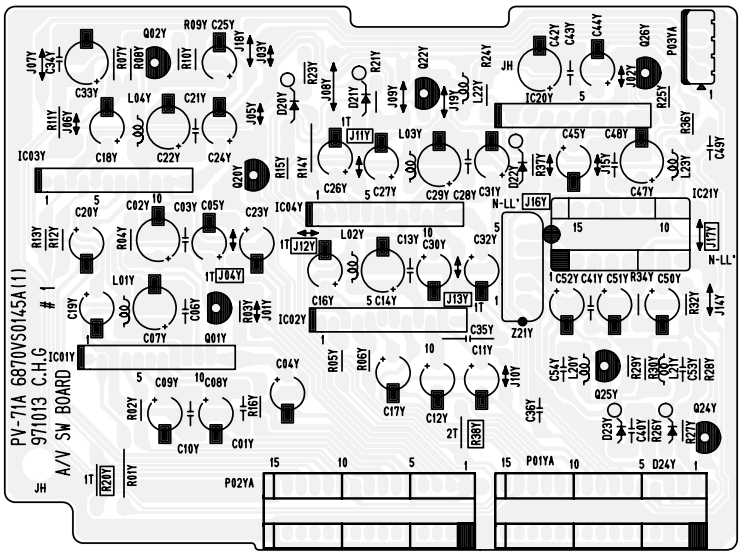
3854VA0028A (980415)

Y/C & PRE-AMP

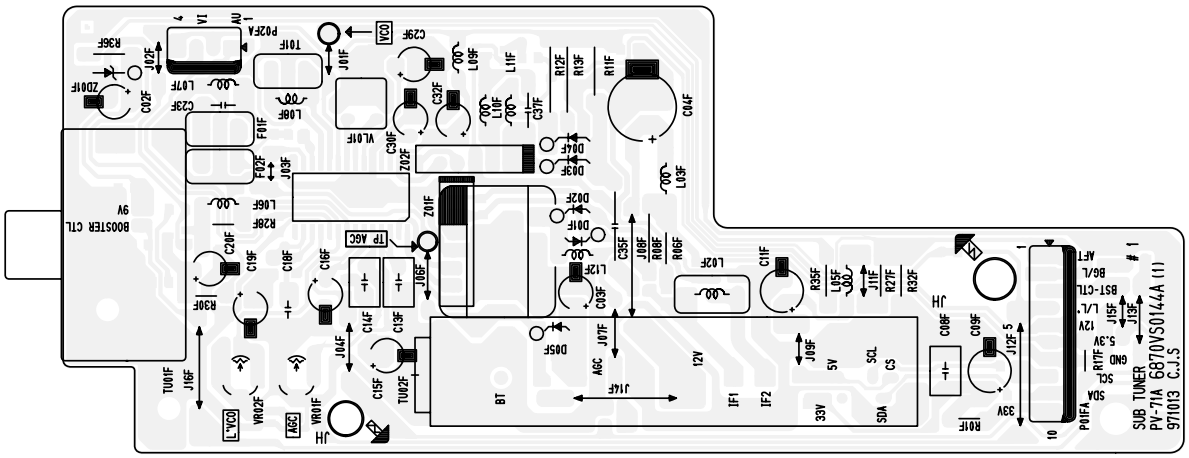


3854VA0028A (980415)

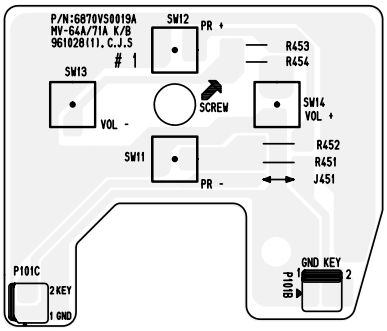
3. A/V SWITCH



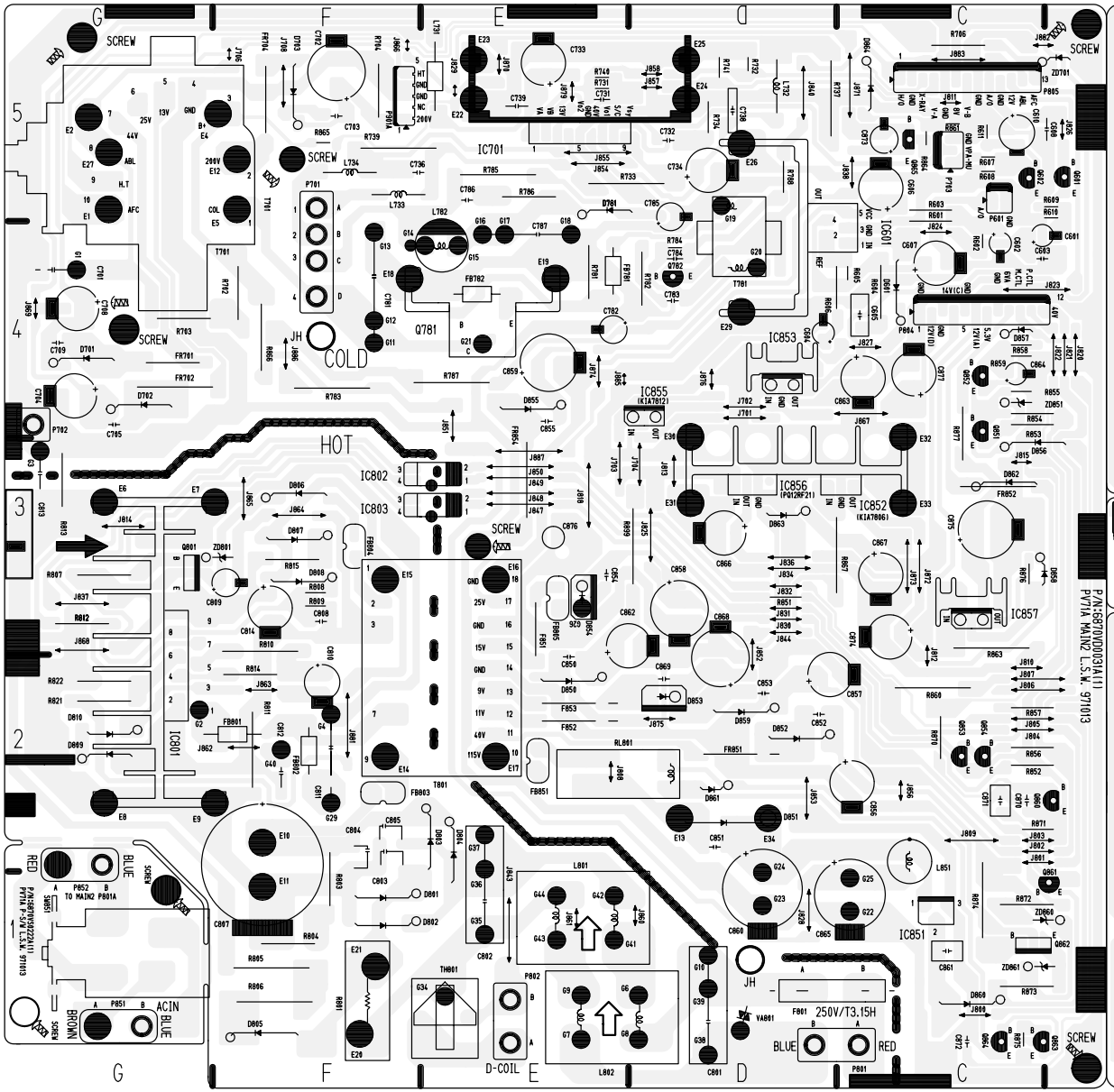
4. TUNER 2



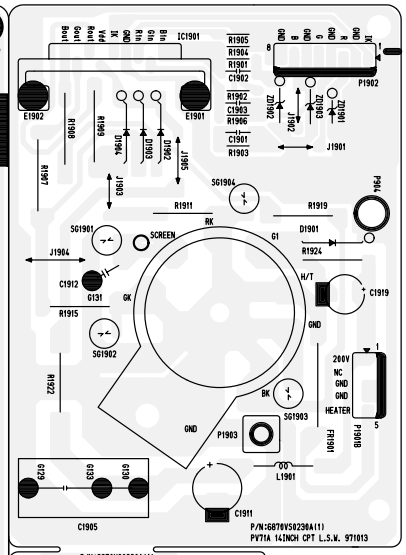
5. KEY BOARD



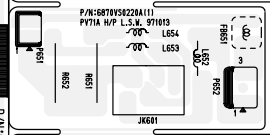
2. MAIN 2



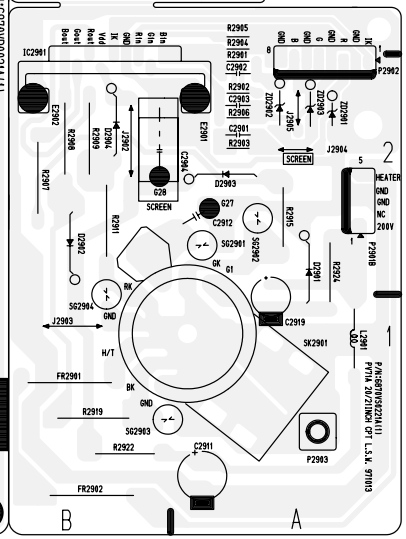
SWITCH PCB



CPT PCB (14")



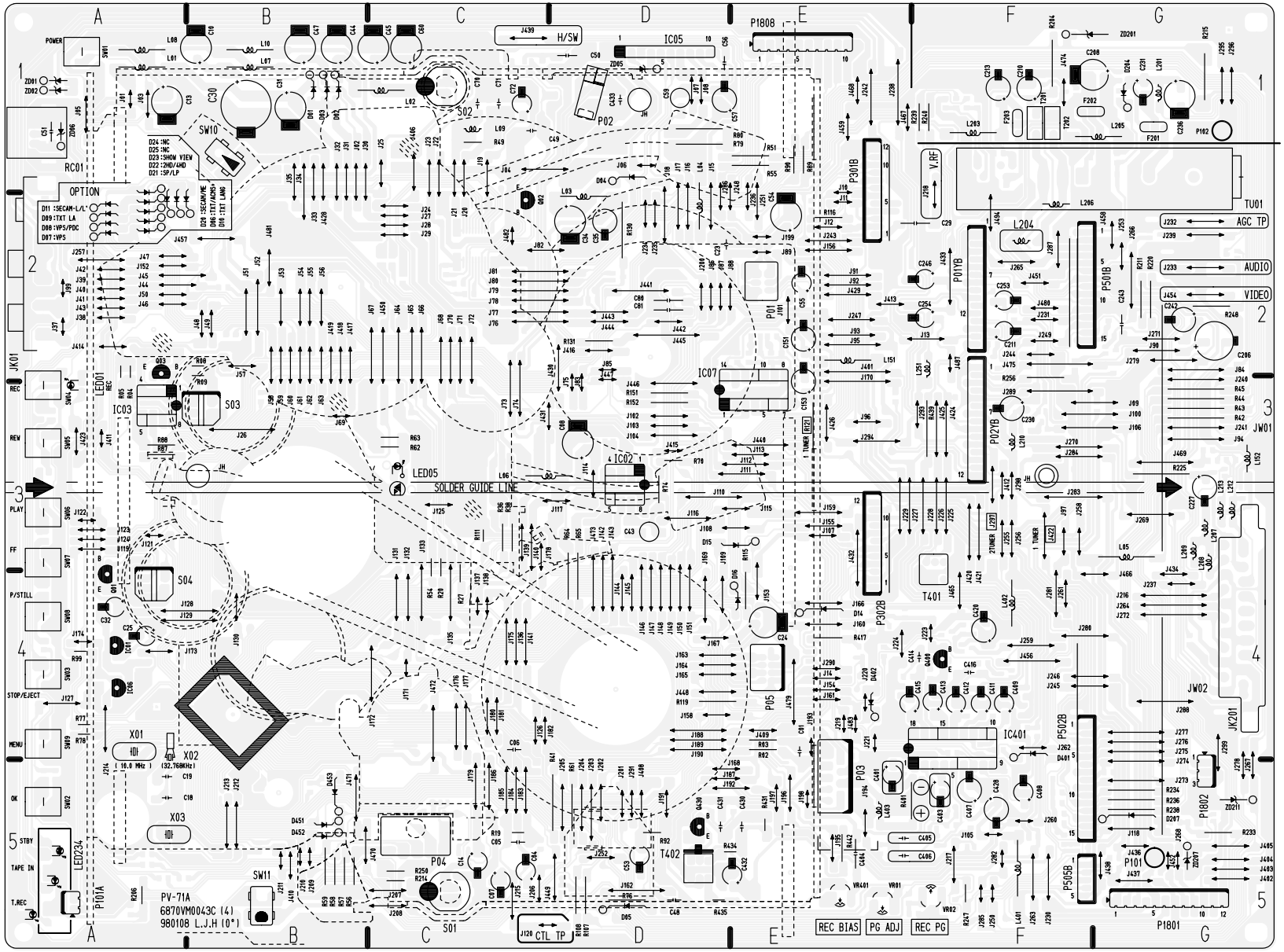
A/V PCB



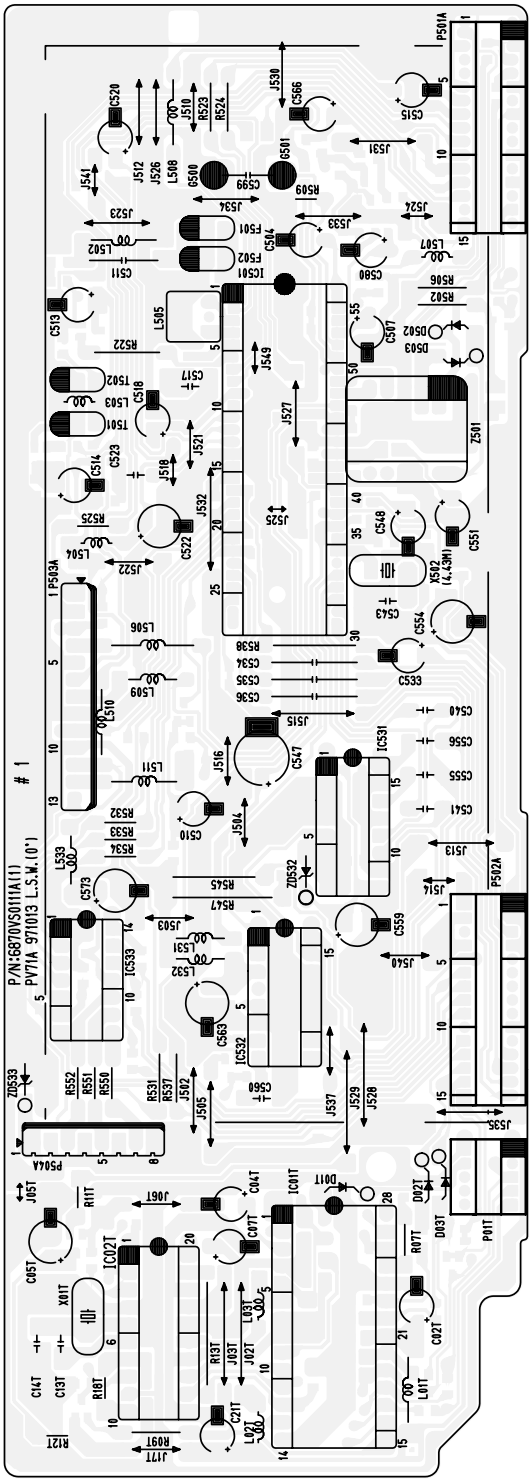
CPT PCB (20/21")

PRINTED CIRCUIT BOARD

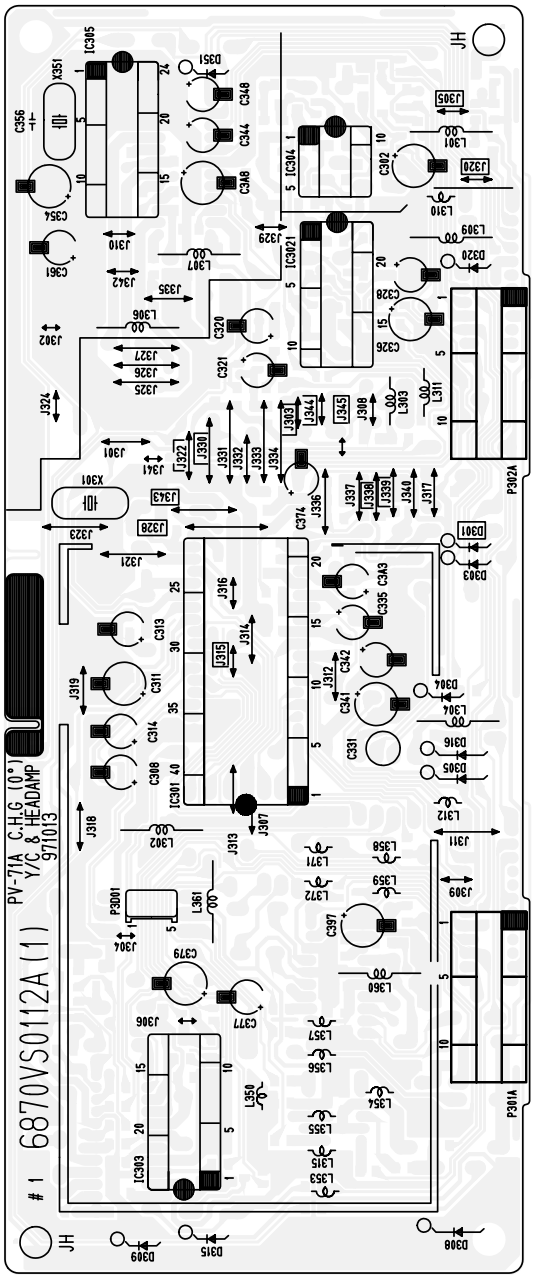
1. MAIN



6. VCD/TEXT



7. Y/C



ADJUSTMENT INSTRUCTIONS

Notes;

(Adjustments must be performed by the following procedures)

1. It is recommended that an isolation transformer be used when servicing this chassis to prevent electric shock and damage to test equipment.
2. The ac line voltage must be maintained at 230 vac, +- 10%, 50/60 hz.
3. Prior to making any adjustments, the receiver must be operated for 10 minutes.

1. DECK ADJUSTMENT

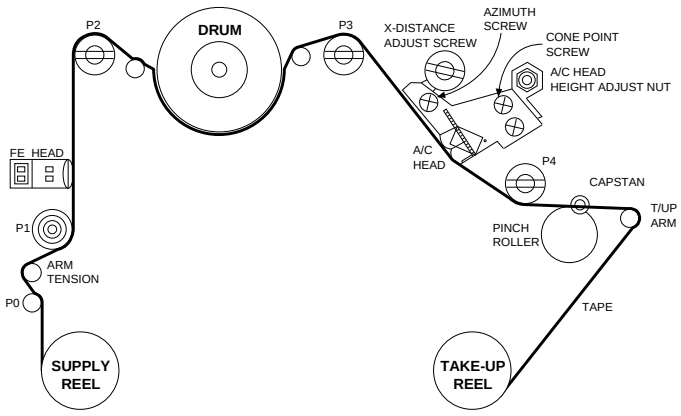
1. Deck Transit System Adjustment

1-1. Necessary Instruments

1) TAPE for SP (4HD), Normal (2HD)
2) Oscilloscope
3) 10:1 Probes 2EA
4) Adjustment Driver
   (P2, P3, X-distance (NUT), Audio (NUT) control)
5) RMS Meter (Audio Level Meter)

1-2.Preliminary Steps

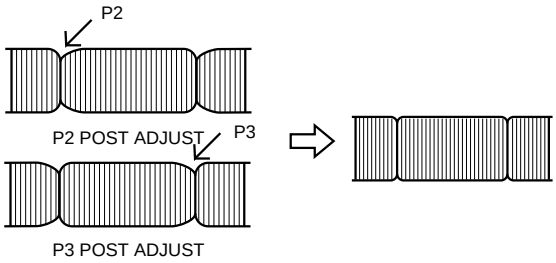
1) Connect CH 1 of the oscilloscope to J439 (H/SW) on the main PCB. Trigger on this channel.
2) Connect CH 2 of the oscilloscope to J218 (RF) on the main PCB. Monitor this waveform when preceding with step 4.
3) Play an alignment tape.
4) When the "auto Trk" caption appears on screen, press the TRK up (+) button on the RCU to initialize the manual tracking feature.
5) If manual tracking differs from auto tracking, precede with steps 1-3 (RF Linearity) and 1-4 (X-Distance Adj.).



<Adjust Parts Location>

1-3. RF linearity check and adjustment

1) Adjust P2 & P3 so that the RF ENVELOPE waveform is maximum and stabilized .
2) Check if the ENVELOPE waveform is at its maximum size by pressing TRK UP(+) and DOWN(-) button one step.



<Adjustment waveform>

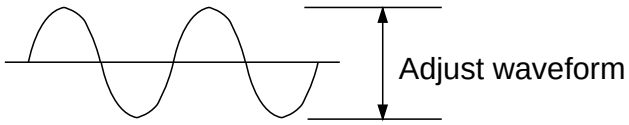
1-4. X-Distance Adjustment

1) Turn the Cone Screw of the DECK left or right so that the RF waveform is maximum.
2) Check if the RF waveform satisfies the linearity by pressing TRK UP(+) and DOWN(-) button one step.

   CAUTION: If the RF waveform becomes maximum with the Cone Screw more than 2 turns, its out of adjustment. (2 turns; 720)

1-5. Audio Level Check and Adjustment

1) Connect "+" terminal of RMS Meter (Audio Level Meter) to J233 on MAIN PCB AUDIO OUT and "-" terminal to GND, respectively.
2) Play the 1khz and 7khz segments on the alignment tape and confirm if the spec is meet in item #3. If not adjust the azimuth screw to meet this spec.
3) Audio Level Spec: 1KHz ; 0.5 +_0.1Vrms
   6KHz ; 1K +_1.5dB



<Adjustment Waveform>

2. CIRCUIT ADJUSTMENT

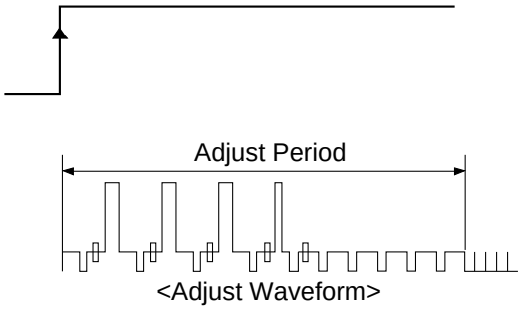
1. PG Adjustment

1-1. Necessary Instruments

1) Alignment tape SP
2) Oscilloscope
3) 10 : 1 Probe

1-2.Adjustment

1) PLAY exclusive use of SP tape. (2HD: NORMAL TAPE)
2) Connect CH 1 of the Oscilloscope to J439 (H/SW) on the MAIN PCB and VOL/DIV to 1V Range and Trigger the Oscilloscope.
3) Connect CH 2 of the oscilloscope to J454 (Video Out) on the main PCB and set the VOL/DIV to 500mV Range.
4) Set TIME/DIV of oscilloscope to 50us Range.
5) Adjust VR01 so that V-sync Falling Edge of Video signal become 412usec+_20usec.



<Adjust Waveform>

* **CAUTION:** Set the trigger mode of Oscilloscope to DC.

2. Normal REC Bias Level Adjustment

2-1. Necessary Instruments

1) Blank tape for Recording
2) RMS Meter

2-2. Adjustment

1) Set the TV/VCR to A/V input mode.
2) Insert a tape and press REC button.
3) Connect RMS Meter's (+), (-) to R401 on MAIN PCB.
4) Adjust VR401 so that the RMS Meter's indicator become within 2.6mV+_0.05mV.

3. Focus Voltage Adjustment

1) Receive the cross hatch pattern.
2) Press the PICTURE button to set the Standard ON condition.
3) Adjust Focus control knob so that the focus of center & circumference to be best.

4. Screen Adjustment

1) Press TV/AV button and select AV mode.
2) Adjust SCREEN control until the retrace line is visible and return until the retrace line is invisible.

* How to get into SVC mode when you don't have SVC Remote Controller.
Push the "OK" Key on the user's Remote Controller and local "OK" button at the same time.

5. VCO Adjustment

1) Select channel 0.
2) Input PAL Digital pattern (175.25MHz).
3) Press SVC Key on the Service Remote Controller to get into SVC mode and press PR +/- Key to select VCO.
4) Press VOL +/- Key until OK is displayed on the screen.

6. LCO Adjustment

1) Select channel 99.
2) Input SECAM-L' pattern (55.75MHz).
3) Press SVC Key on the Service Remote Controller to get into SVC mode and Press PR +/- Key to select LCO.
4) Press VOL +/- Key until OK is displayed on the screen.

7. RF AGC Adjustment

1) Input PAL DIGITAL PATTERN.
2) Connect DMM to AGC(J232) test point on the Main PCB.
3) Press SVC Key on the Service Remote Controller to get into SVC mode and press PR +/- Key to select AGC.
4) Press VOL +/- Key until DMM reads the data on the table below.

MODEL		KL/KB/KI	
2 TUNER	Electric fields strength	70dBu	1dBu
	AGC Voltage	5.5	0.1Vdc
1 TUNER	Electric fields strength	65dBu	1dBu
	AGC Voltage	5.6	0.1Vdc

Note : When adjusting 2 TUNER Model, select BOOSTER OFF from MENU.

8. White Balance Adjustment

1) Input a signal which lower half is black and upper half is white.
2) Set the picture at standard on.
3) Press SVC Key on the Service Remote Controller to get into Service mode.
4) Press PR +/- Key to select BG, RG.
Press VOL +/- Key until X=281+_3, Y=288+_3.

* GG is fixed data at 32 so, do not adjust GG data.

9. Deflection Data Adjustment

1) Input PAL Digital Pattern.
2) Press SVC Key on the Service Remote Controller and select LINE SERVICE 2 mode.
3) Press PR +/- Key to select an adjustment mode.
4) Press VOL +/- Key to adjust data.

5) Vertical SLOPE adjustment

a) Select V-SLP mode with PR +/- Key.
b) Press VOL +/- Key until the horizontal center line of the large circle coincides with Blanking Line.

6) Vertical amplitude adjustment

a) Select V-AMP mode with PR +/- Key.
b) Press VOL +/- Key until the upper and lower end of the large circle reach 5 mm inside from the effective area of CPT.

7) Vertical Shift Adjustment

a) Select V-SFT mode with PR +/- Key.
b) Press VOL +/- Key until the horizontal center coincides with the vertical sign slot mark of CPT.

8) Horizontal Shift Adjustment

a) Select H-SFT mode with PR +/- Key.
b) Press VOL +/- Key until the vertical center coincides with the horizontal sign slot mark of CPT.

9) Vertical S-Correction Adjustment

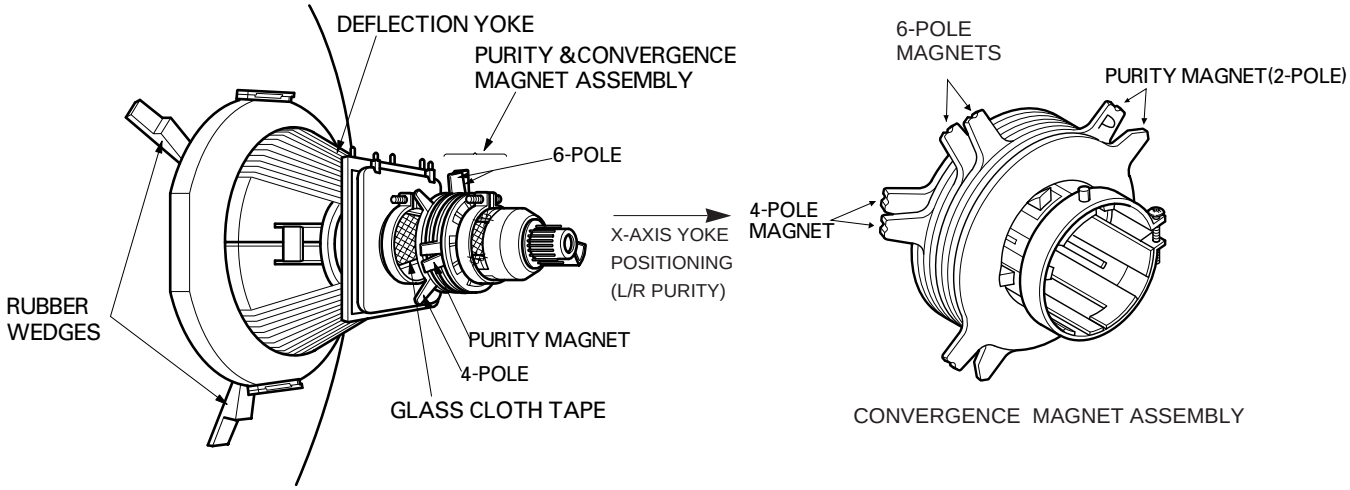
a) Select S-COL mode with PR +/- Key.
b) Press VOL +/- Key until the grid of Cross Hatch Pattern is even all over the screen.

PURITY & CONVERGENCE ADJUSTMENT

Caution:
Convergence and Purity have been factory aligned. Do not attempt to tamper with these alignments.
However, the effects of adjacent receiver components, or replacement of picture tube or deflection yoke may require the need to readjust purity any convergence.

5. Reconnect the internal degaussing coil.

6. Position the beam bender locking rings at the 9 o'clock position and the other three pairs of tabs (2,4 and 6 pole magnets) at the 12 o'clock position.



* Purity Adjustment

This procedure DOES NOT apply to bonded yoke and picture tube assemblies.
The instrument should be at room temperature (60 degrees F or above) for six (6) hours and be operating at low beam current (dark background) for approximately 20 to 30 minutes before performing purity adjustments.

CAUTION: Do not remove any trim magnets that may be attached to the bell of the picture tube.

1. Remove the AC power and disconnect the internal degaussing coil.

2. Remove the yoke from the neck of the picture tube.

3. If the yoke has the tape version beam bender, remove it and replace it with a adjustable type beam bender (follow the instructions provided with the new beam bender)

4. Replace the yoke on the picture tube neck, temporarily remove the three (3) rubber wedges from the bell of the picture tube and then slide the yoke completely forward.

7. Perform the following steps, in the order given, to prepare the receiver for the purity adjustment procedure.

   a. Face the receiver in the "magnetic north" direction.

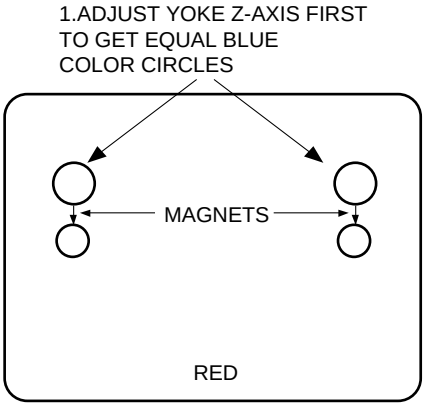
   b. Externally degauss the receiver screen with the television power turned off.

   c. Turn the television on for approximately 10 seconds to perform internal degaussing and then turn the TV off.

   d. Unplug the internal degaussing coil. This allows the thermistor to cool down while you are performing the purity adjustment. DO NOT MOVE THE RECEIVER FROM ITS "MAGNETIC NORTH" POSITION.

   e. Turn the receiver on and obtain a red raster by increasing the red bias control (CW) and decreasing the bias controls for the remaining two colors (CCW).

   f. Attach two round magnets on the picture tube screen at 3 o'clock and 9 o'clock positions, approximately one (1) inch from the edge of the mask (use double-sided tape).



8. Referring to above, perform the following two steps:
   a. Adjust the yoke Z-axis to obtain equal blue circles.
   b. Adjust the appropriate beam bender tabs to obtain correct purity (four equal circles).

9. After correct purity is set, tighten the yoke clamp screw and remove the two screen magnets.

10. Remove the AC power and rotate the receiver 180 degrees (facing "magnetic south").

11. Reconnect the internal degaussing coil.

12. Turn the receiver on for 10 seconds (make sure the receiver came on) to perform internal degaussing, and then turn the receiver off.

13. Unplug the internal degaussing coil.

14. Turn on the receiver and check the purity by holding one (1) round magnet at the 3 o'clock and a second round magnet at 9 o'clock position. If purity is not satisfactory, repeat steps 8 through 14.

15. Turn off the receiver and reconnect the internal degaussing coil.

* Convergence Adjustment

Caution: This procedure DOES NOT apply to bonded yoke and picture tube assemblies.
Do not use screen magnets during this adjustment procedure. Use of screen magnets will cause an incorrect display.

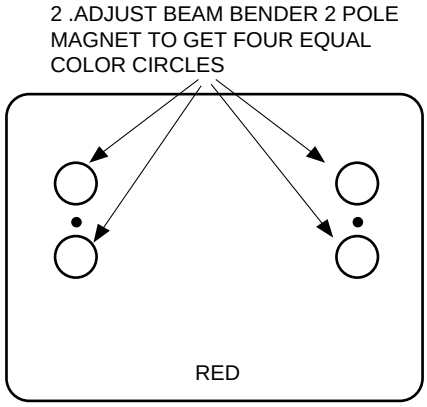
1. Remove AC power and disconnect the internal degaussing coil.

2. Apply AC Power and set the brightness to the Picture Reset condition. Set the Color control to minimum.

3. Apply 8V to the pin.

4. Adjust the Red, Green and Blue Bias controls to get a dim white line.

5. Remove the AC power and 8V from the pin.



6. Reconnect the internal degaussing coil and apply AC power.

7. Turn the receiver on for 10 seconds to perform internal degaussing and then turn the receiver off again.

8. Unplug the internal degaussing-coil.

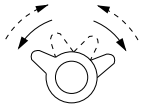
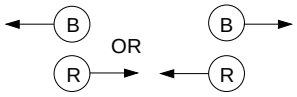
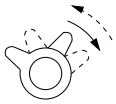
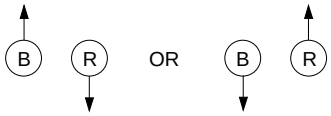
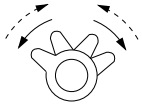
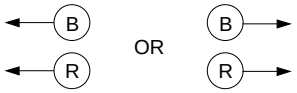
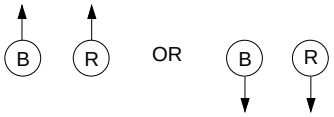
9. Turn on the receiver, connect a signal generator to the VHF antenna terminal and apply a crosshatch signal.

Caution: During the convergence adjustment procedure, be very careful not to disturb the purity adjustment tabs are accidentally move, purity should be confirmed before proceeding with the convergence adjustments.

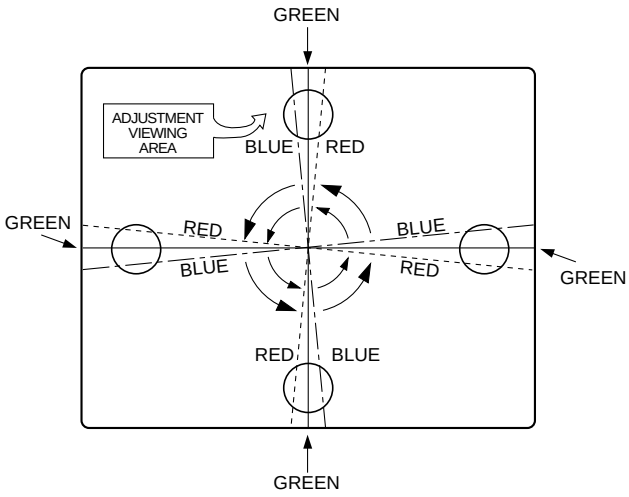
Note: Make sure the focus is set correctly on this instrument before proceeding with the following adjustment.

10. Converge the red and blue vertical lines to the green vertical line at the center of the screen by performing the following steps (below TABLE).
    a. Carefully rotate both tabs of the 4-pole ring magnet simultaneously in opposite directions from the 12 o'clock position to converge the red and blue vertical lines.
    b. Carefully rotate both tabs of the 6-pole ring magnet simultaneously in opposite directions form the 12 o'clock position to converge the red and blue (now purple) vertical lines with the green vertical line.

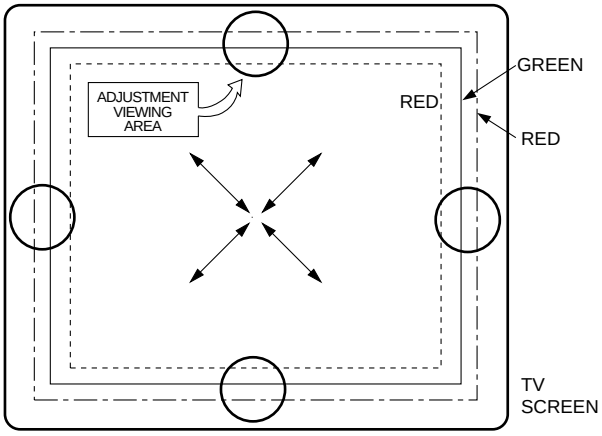
11. Converge the red and blue horizontal with the green line at the center of the screen by performing the following steps. (below TABLE)
    a. Carefully rotate both tabs of the 4-pole ring magnet simultaneously in the same direction (keep the spacing between the two tabs the same) to converge the red and blue horizontal lines.
    b. Carefully rotate both tabs of the 6-pole ring magnet simultaneously in same direction (keep the spacing between the two tabs the same) to converge the red and blue (now purple) horizontal lines with the green horizontal line.
    c. Secure the tabs previsouly adjusted by locking them in place with the locking tabs on the beam bender.

RING PAIRS	ROTATION DIRECTION OF BOTH TABS		MOVEMENT OF RED AND BLUE BEAMS
4 POLE		OPPOSITE	
		SAME	
6 POLE		OPPOSITE	
		SAME	

UP/DOWN ROCKING OF THE YOKE CAUSES OPPOSITE ROTATION OF RED AND BLUE RASTERS

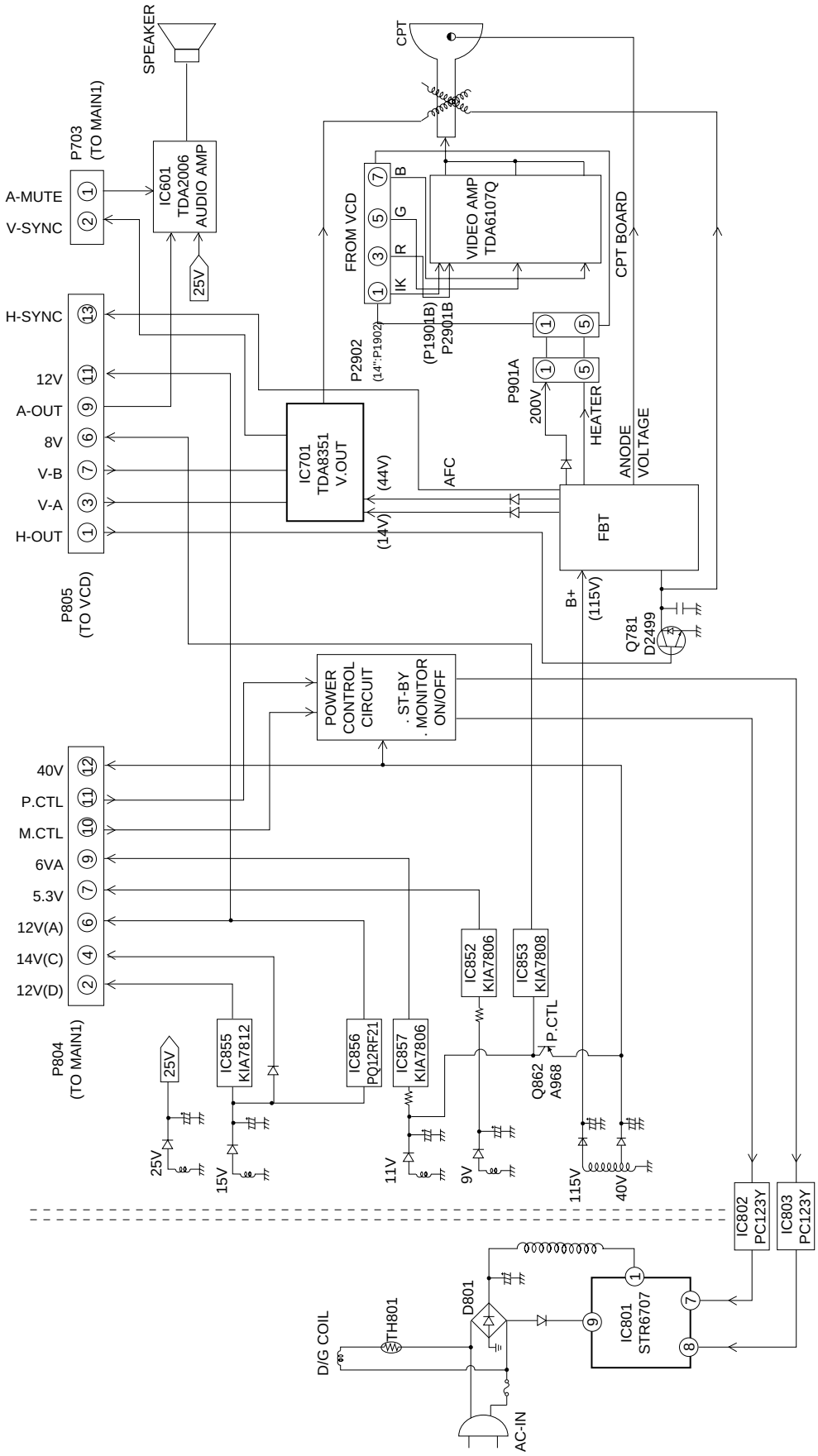


LEFT/RIGHT ROCKING OF THE YOKE CAUSES OPPOSITE SIZE CHANGE OF THE RED AND BLUE RASTERS

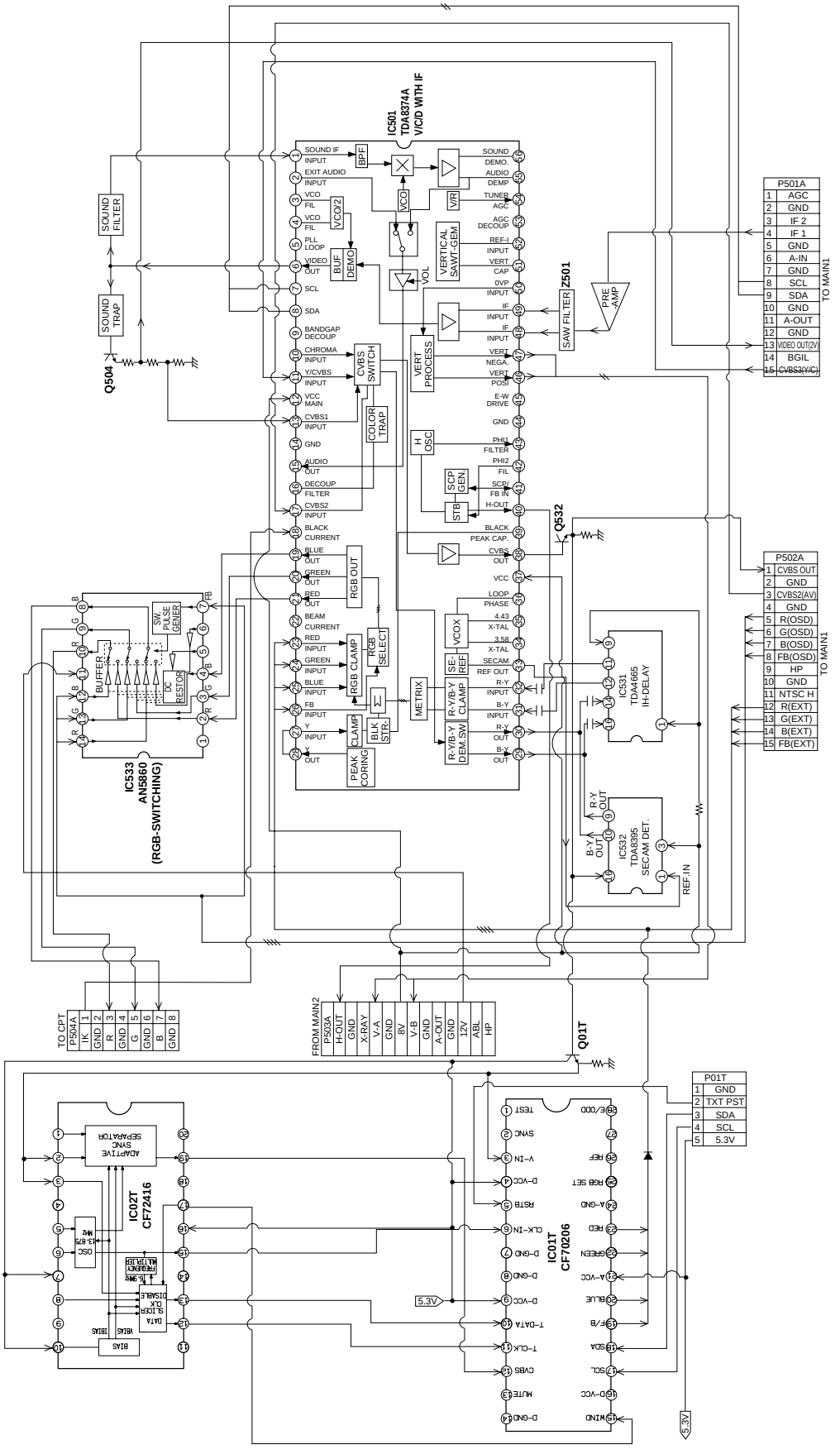


12. While watching the 6 o'clock positions on the screen, rock the front of the yoke in a vertical (up/down) direction to converge the red and blue vertical lines. (Fig upper left)
13. Temporarily place a rubber wedge at the 12 o'clock position to hold the vertical position or the yoke.
14. Check the 3 o'clock and 9 o'clock areas to confirm that the red and blue horizontal lines are converged.
    If the lines are not converged, slightly offset the vertical tilt of the yoke (move the rubber wedge if necessary) to equally balance the convergence error of the horizontal lines at 3 o'clock and 9 o'clock and the vertical lines at 6 o'clock and 12 o'clock.
15. Place a 1.5 inch piece of glass tape over the rubber foot at the rear of the 12 o'clock wedge.
16. While watching the 6 o'clock and 12 o'clock areas of the screen, rock the front of the yoke in the horizontal (left to right) motion to converge the red and blue horizontal lines. (Fig. upper right)
17. Temporarily place a rubber wedge at the 5 o'clock and 7 o'clock positions to hold the horizontal position of the yoke.
18. Check the 3 o'clock and 9 o'clock areas to confirm that the red and blue vertical lines are converged. If the lines are not converged, slightly offset the horizontal tilt of the yoke (move the temporary rubber wedges if necessary) to equally balance the convergence error of the horizontal lines at 6 o'clock and 12 o'clock and the vertical lines at 3 o'clock and 9 o'clock.
19. Using a round magnet confirm purity at the center, right and left sides and corners. See Purity Adjustment Procedure.
20. Reconfirm convergence and apply a 1.5 inch piece of glass tape over the rubber foot at the rear of the 5 o'clock and the 7 o'clock wedges.

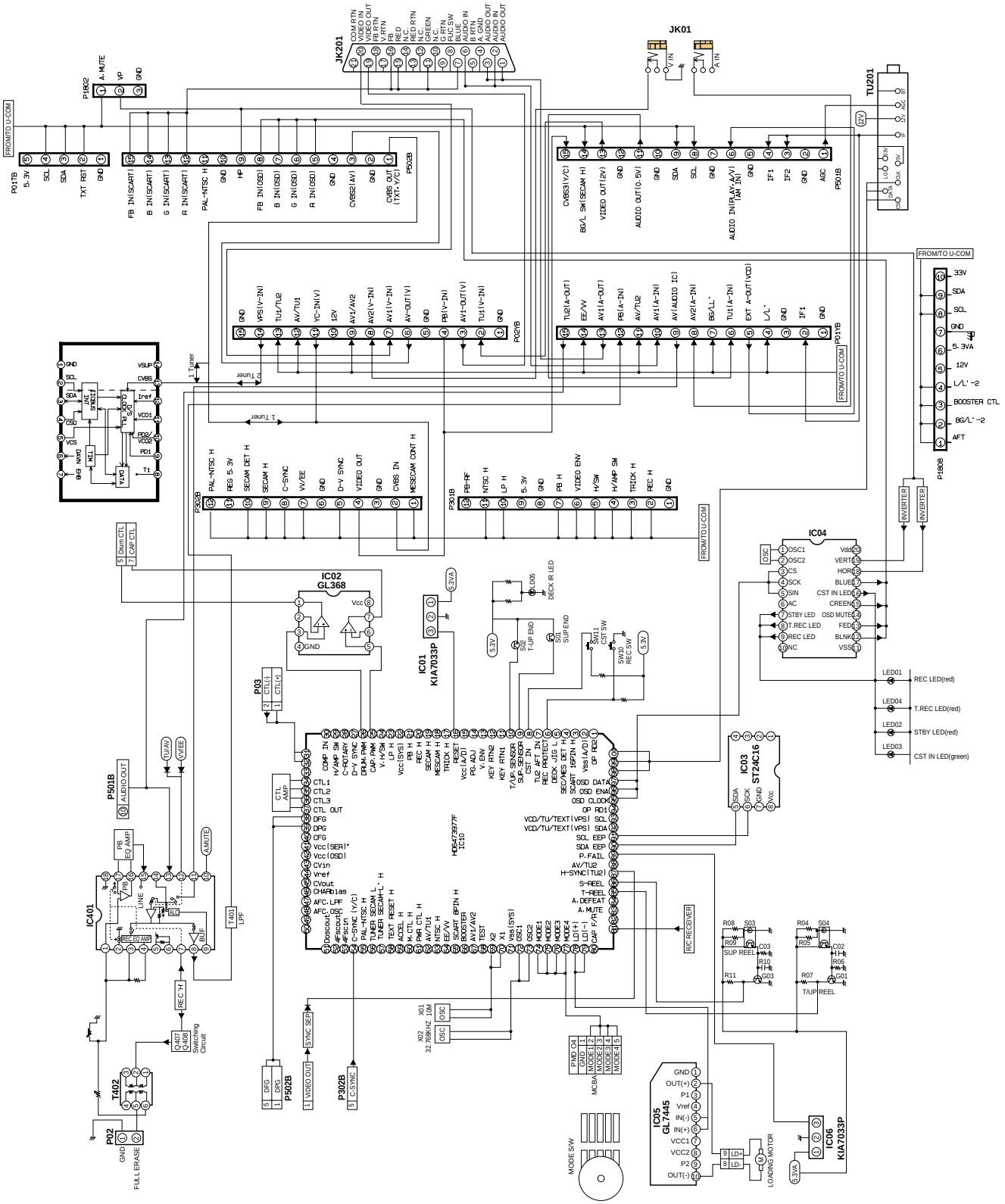
MAIN2 BLOCK DIAGRAM



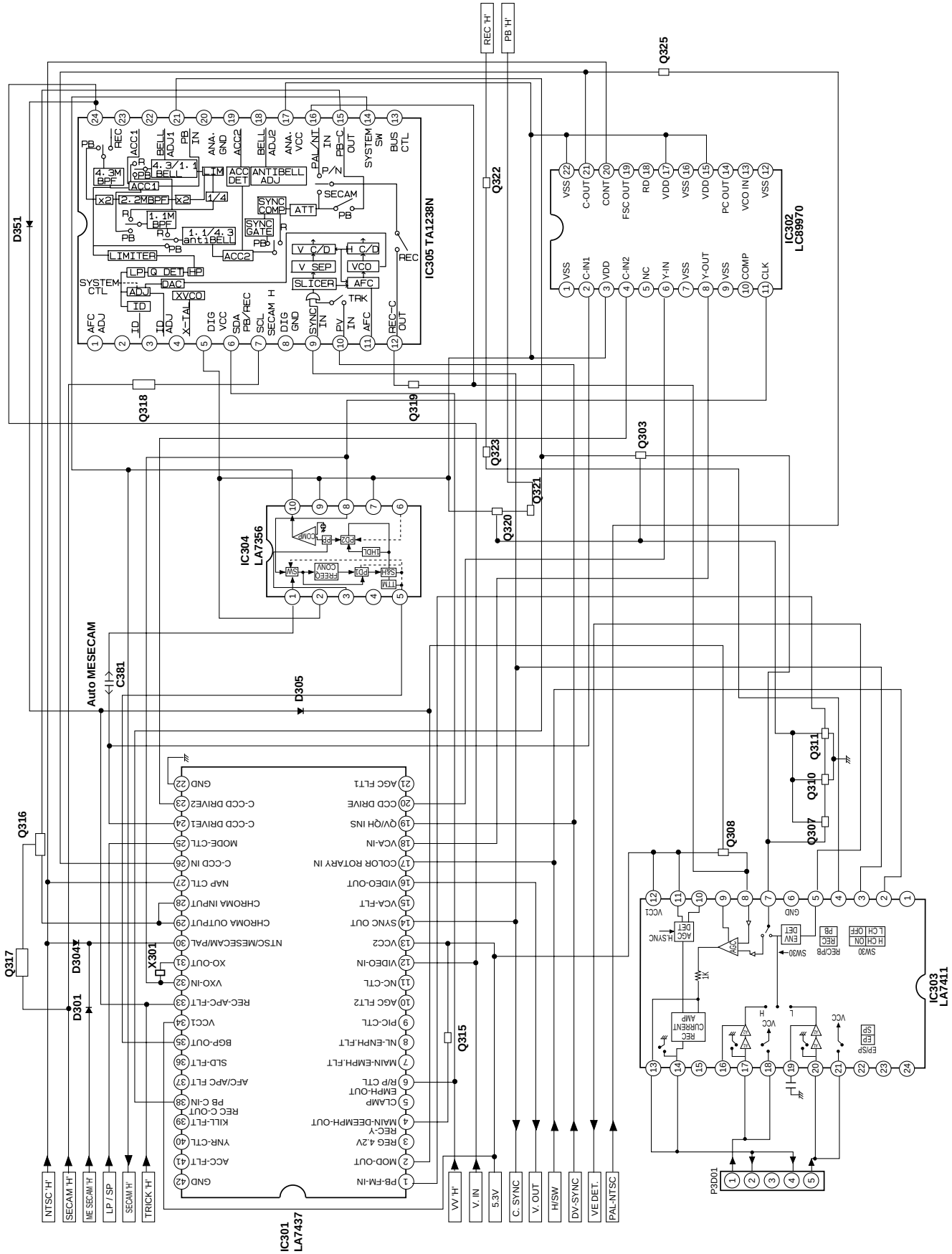
VCD BLOCK DIAGRAM



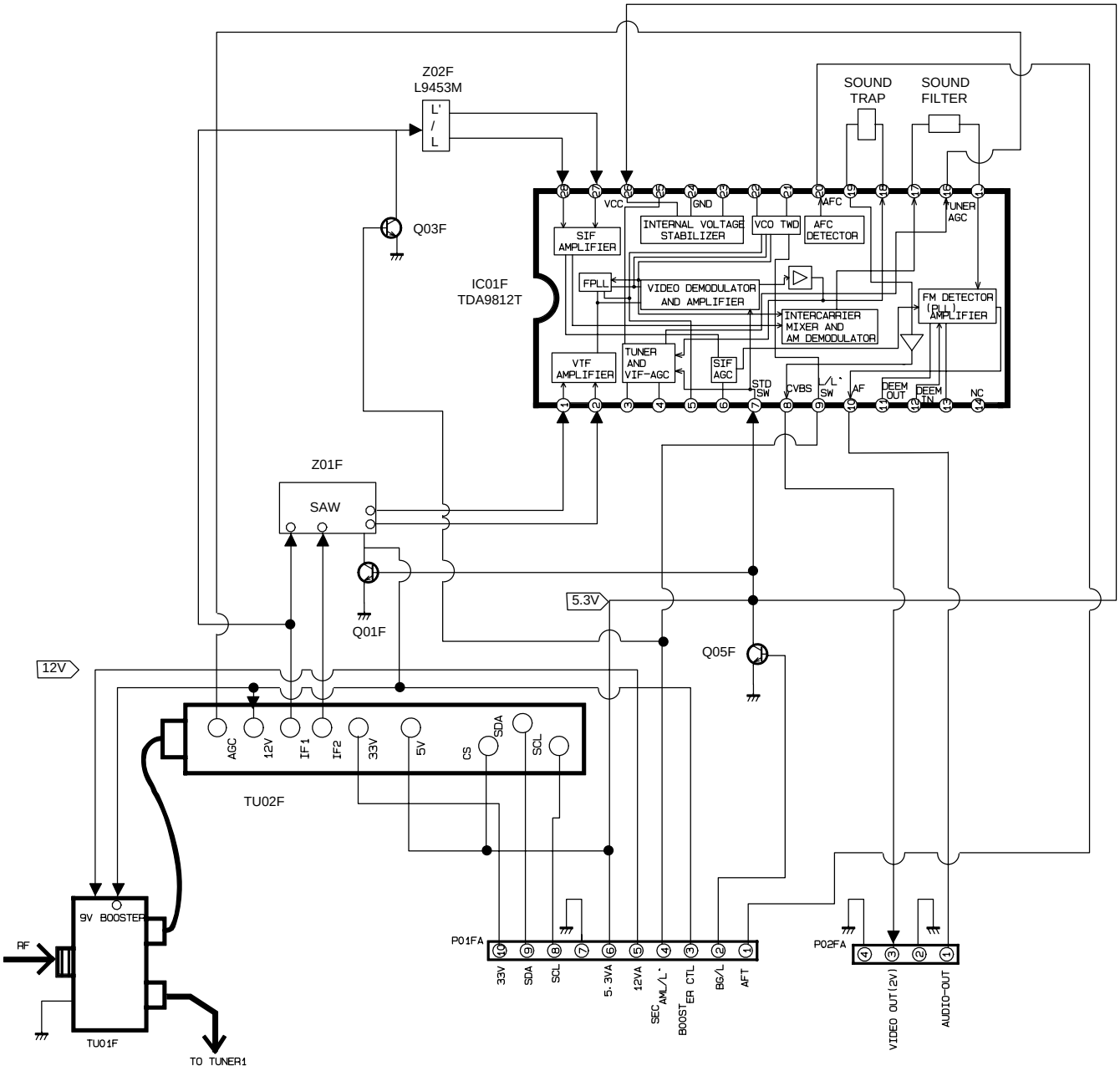
SYSTEM/AUDIO/SWITCHING BLOCK DIAGRAM



Y/C BLOCK DIAGRAM



SUB-IF BLOCK DIAGRAM



A/V SWITCHING BLOCK DIAGRAM